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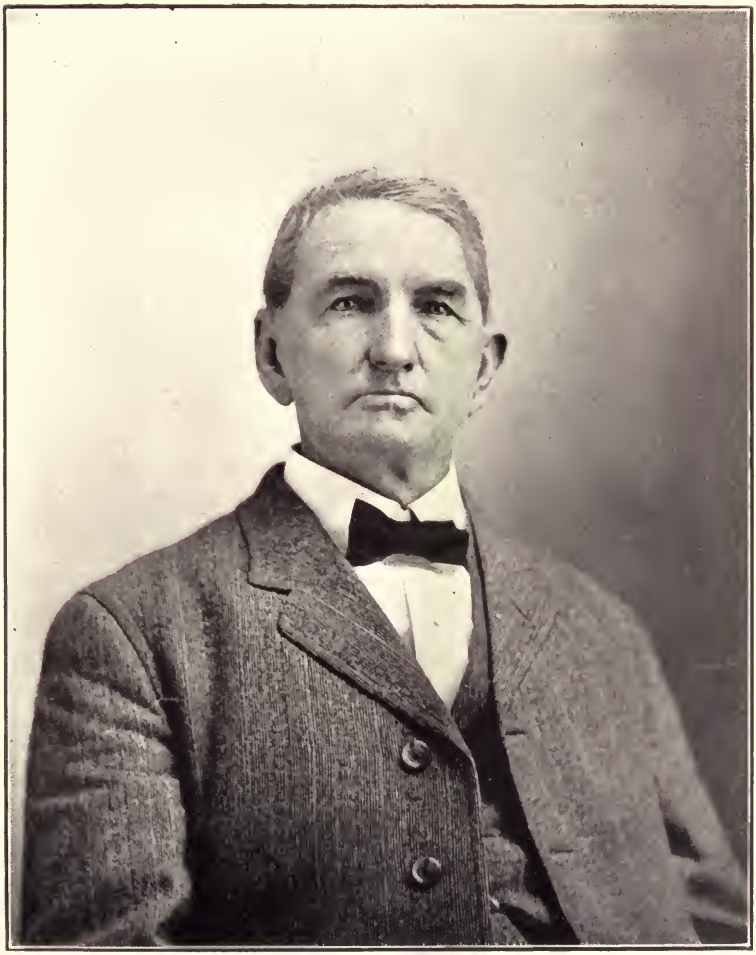
THE INDIAN

OR MOUND BUILDER



THOMAS BECKWITH

UNIV. OF
CALIFORNIA

THE INDIAN

OR

MOUND BUILDER

The Indians, Mode of Living, Manners, Customs, Dress, Ornaments, etc., Before the White Man Came to the Country, Together with a List of Relics Gathered by the Author.

Geology, Ethnology and Archæology of this Country and the Pacific Tribes Treated to a Limited Extent.

THOMAS BECKWITH

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PREFACE.

My object in publishing this work is to make known my researches and discoveries. Elevating sentiments result from the researches and we feel a gratitude towards the great God that created us capable of much progress. It is the scientific man that more fully appreciates the Creator, for he better understands the great works and laws that he has created.

My research in history and gathering of relics for the past thirty years, by exploring the mounds, watching along the ditches,and carefully examining the old camp sites where the plow had turned out many interesting relics that have been buried for ages, reveal to me much of the past history of the Indians, who occupied this part of the country in prehistoric times, and I will endeavor to give that information to the public.

THOMAS BECKWITH.

Charleston, Mo.

235372

WATER BOTTLE.
Held up by three human figures. Reproduced from one in my collection.

THE INDIAN
OR
MOUND BUILDER

THE EARTH AND ITS INHABITANTS.

Everyone is interested in a knowledge of the composition of the Earth. It is our mother. It is from her we get our sustenance. Here we find our enjoyments and gain our knowledge, and when death comes we again return to her bosom to await the final reckoning of all things.

We plow and plant the fields and she returns us an hundred-fold. We go into her depths and find the minerals so necessary to our comfort and convenience. We plow her briny depths with our floating palaces. There is no better description of railway trains that thread her surface like arteries carrying sustenance to all parts of the world than that given by the Prophet Nahum 2,600 years ago in his description of chariots. He says: "The chariots shall rage in the streets, they shall jostle one against another in the broad ways, they shall seem like torches, they shall run like lightnings."

Composition.

The composition of the crust of the earth, as given in Chambers & Salisbury's Geology is as follows:

Oxygen	47.13 per cent	Silicon	27.89 per cent
Aluminum	8.13 per cent	Iron	4.71 per cent
Calcium	3.53 per cent	Magnesium	2.64 per cent
Potassium	2.35 per cent	Sodium	2.68 per cent
Titanium	.32 per cent	Hydrogen	.17 per cent
Carbon	.13 per cent	Phosphorus	.09 per cent
Manganese	.07 per cent	Sulphur	.06 per cent
Barium	.04 per cent	Chromium	.01 per cent
Nickel	.01 per cent	Strontium	.01 per cent
Lithium	.01 per cent	Chlorine	.01 per cent
Fluorine	.01 per cent		

Elements less than 0.01 are not considered abundant enough to affect the total and equally exact dates regarding them are not accessible.

Flint.

The composition of silica, or what is known generally as flint, is composed of Oxygen 53.33, Silicon 46.67-100. This element is scattered over nearly the entire globe, or at least it has been in reach of man and used by him for many thousands of years.

When his bones are found fifty and sixty feet under ground, reaching back into the Paleolithic period, there you find his flint implements. Coming on down through the Neolithic period of many thousands of years, you find a greater number and a greater variety of flint tools. Then, reaching through the greater part of the Historic age, you find him using the flint in many forms and in all of America, up to a very recent date, flint implements were used

This shows how important this element has been to man. And what a blessing it has been to him, that it has

been strewn over the whole face of the earth, furnishing material for many thousands of years out of which he made all, or nearly all, of his tools that was necessary for him to have. Its hardness and the ease with which it could be chipped into shape, rendered it indispensable to man in the early ages.

In the crust of the earth 27.89 per cent. of it is silicon. This, combined with 31.87 per cent. parts of oxygen makes silica 59.76 per cent. of the crust of the earth, and more than half of the known earth is silica, generally known as quartz of flint. All of this was prepared by God for man to use in his primative days.

Location of Charleston.

Charleston is situated in the post tertiary formation, the most recent of the periods. During this was when the glacial period was formed, which covered the northern part of the United States to a depth of 1,000 to 6,000 feet of ice. The south line of this glacier had the Ohio river for its southeast border and the Missouri river for its southwest, passing through Illinois about sixty miles north of Cario, and when it began to melt it threw out a vast sheet of water of great depth.

Cause of the Glacial Period.

The cause of the Glacier forming is supposed by some to have been the raising of the lands to a height of 2,000 or more feet above what it is today. And it is certainly proven by the old channel of the Hudson river, as surveyed and traced out to sea by the government to a distance of a

hundred and forty miles, as shown by James D. Dana, p. 211.

The Hudson as Traced out to Sea by the Government.

	IN CHANNEL	ON BANK OF OLD CHANNEL	OLD CHAN'L
20 miles out to sea	126 ft. deep	Original bank 60 ft. deep	66
40 " " " "	210 " "	" " 120 " "	90
60 " " " "	252 " "	" " 180 " "	72
80 " " " "	258 " "	" " 180 " "	78
100 " " " "	246 " "	" " 240 " "	06
120 " " " "	1098 " "	" " 300 " "	798
130 " " " "	1770 " "	" " 600 " "	1170
140 " " " "	2070 " "	" " 1800 " "	270

A proof of the high elevation in the Glacial period is afforded by the river valleys of the coast region between southern Maine and Hudson Bay. Some of the fiords, the depths of which were found by soundings, are stated by Spencer to be from 2,000 to 3,670 feet below sea level. See J. D. Dana, p. 948.

The height of the ice at Mount Washington is placed at not less than 6,500 feet. The Adirondacks at 7,000. See J. D. Dana, page 948.

The thickness of the ice along the Canada water shed is placed at 4000 to 5000 feet, and south of that at from 1000 to 3000 feet. See J. D. Dana, page 953.

The ancient bed of the Ohio river was 150 feet deeper than that over which it now flows, having been filled up with glacial debris to its present level. See page 270, Ice Age, by G. F. Wright.

Mr. Wright gives the width of the Mississippi at from five to ten miles and several hundred feet deep below St. Louis,. See page 281, Ice Age, by G. F. Wright.

See map of G. F. Wright, page 174, showing the ice

drainage down to the Ohio, Mississippi and Missouri on down the Bay of Mississippi.

The head of the Bay of Mississippi began some twenty-five miles above Cairo and the bay extended to the Gulf of Mexico, being about six hundred miles long and near one hundred miles broad and filled during the glacial period with clay, sand and gravel from two hundred to five hundred feet in depth.

Think of the crushing, grinding force of that vast pack of ice moving slowly over the earth as shown by the grooves cut out in the rocks.

The glaciers were the mills of the God that no doubt ground up the rocks preparatory to carpeting the earth with a rich vegetation, it in turn nourishing the animal life.

In finishing this part of the country there was a blanket of red clay from two to four feet in thickness spread over the sand and gravel. On top of this was another blanket of black sand from naught to four feet in thickness with a few rifts in it where the clay protruded.

This glacial period is estimated to have lasted from 200,000 to 300,000 years and to have ended in this locality from 10,000 to 15,000 years ago (J. D. Dana).

Niagara Falls, from some surveys made about fifty years ago, it is calculated, have receded about a mile in a thousand years. The falls are seven miles away from where they started, and it has been seven thousand years since the glacier disappeared from that region.

It is reasonable to suppose that it disappeared from Southern Illinois at a much earlier date and formed the strata in the red clay. These strata are separated by dark

carboniferous-looking material from a quarter to a half inch in thickness, that burns when set on fire.

Now, these strata were formed during the advancing and retreating of the ice.

When the periods of change came on and the cold would pour down upon this country, the ice would cease to melt, the waters no longer flooded the country, vegetation would spring up and for many years this vegetation grew very rankly out of the virgin soil.

Then another change came perhaps, brought about by the continued southern winds melting the ice. Then came floods with their sediments, covering up the vegetation which formed these black strata; then after a long period the ice would again advance and then retreat until the current of the water became more swift; then the clay was carried on and in its place came the sand that now covers this land, mostly a rich black loam.

These changes of soil and ridges were brought about by ice dams. Imagine, if you can, a cake of ice averaging 4,000 feet thick, about 1,600 miles east and west and 1,200 miles north to south, pouring its floods of ice and water down the valleys of the Mississippi and Ohio, over what is known in geology as the Bay of the Mississippi, expanding from ten to sixty and one hundred miles wide, and as the waters spread out became more shallow, grounding the large cakes of ice, making ice dams here and there, forming banks of sand behind the dams and strata of clay in front of the dams. One of these sand ridges was forty one feet high. This was the highest ridge I measured. It lies about eight miles northwest of Charleston. There are hundreds of other ridges of various heights in the same vicinity.

Around Charleston the surface is level with about one foot fall per mile to the south. An ideal home for the mound builder, with no rocks to injure his flint hoes.

Ruins in Java.

In the Island of Java the country abounds with remarkable Temple ruins, of which the Temple of Borobodo is the most wonderful. There are seven tiers of terraced walls, one above the other, surmounted by a triple circle of seventeen towers surrounding the dome. The temple is 620 feet square and rises to a height of 100 feet. The walls are profusely ornamented with sculpture. Wallace says the amount of human labor and skill expended on the great pyramids of Egypt sinks into insignificance when compared with that required to complete this sculptured hill temple in the interior of Java. (See American Cyclopedia.)

Ruins in Ceylon.

Sir Samuel Baker, in his eight years wandering in Ceylon, described the ruins of Anaradupoora, which covers 256 square miles of ground, a square of sixteen miles. The causeway that approached the city was massive granite steps. He then goes on and gives a grand description of the city as it appeared in the days of its prosperity. It was supposed to have contained millions of inhabitants. Then he describes the present condition. He says: "It has vanished like a tale that is told. It is passed away like a dream; the palaces are dust; the grassy sod has grown in mounds over the ruins of the streets and fallen houses. Nature has turfed them in one common grave with their

inhabitants. The lofty palms have faded away and given place to forest trees; the bear and the leopard crouch in the porches of the temple; the owls roost in the casements of the palaces; the jackall roams among the ruins and finds nothing to appease his hunger. There is their handwriting upon the temple, upon the granite slab which has mocked at time, but there is no man to decipher it. There are the gigantic idols before whom millions have bowed. No mortal man can say what fate befell those hosts of heathens nor when they vanished from the earth."

The thousands of mounds scattered over the United States are monuments left to tell the tale of the poor Indian. The white man has dispossessed him and left him almost without a habitation.

In Easter Island.

Easter Island is distant about 2,300 miles from the coast of South America. It is eleven miles long and six miles wide. The present inhabitants belong to the Polynesian race. The island contains several gigantic stone statues tolerably well chiseled. The largest of these is forty feet high and measures nine feet across the shoulders. Many stand in the crater of the great volcano, while others are scattered about the island generally prostrate. Quite a number unfinished are yet to be seen in the quarries. They were certainly not made by the present race of inhabitants who have no tools adequate to their sculpture nor any means of moving such huge masses of stone.

Polynesian Islanders.

In the Polynesian islands, Tonga-Taboo, one of the Friendly groups of the Polynesian islands, is a wonderful and remarkable megalith, the base of which rests on uprights, thirty feet high and supports a colossal stone bowl, which is no less than thirteen feet in diameter, by one foot in height. In the same island is a trilithon, consisting of a traverse bar resting on two pillars provided with mortices for its reception. The pillars weigh sixty-five tons. In a neighboring island is a circle of uplifted stones covering an area of several hundred yards, which reminds us of the cromlechs of Brittany.

The so-called burial mound of Oberea, in Otheheite island, Polynesia, is a pyramid of which the base is a long square, 280 feet long by 87 feet wide. It is 43 feet high. The top is reached by a flight of steps cut in coralline rock, all these steps being of the same size and perfectly squared and polished. (Easter Island, Book 3, p. 5.)

These monuments and sculptures are certainly the work of a race very different from the race of the present natives, who are altogether incapable of producing anything of the kind and have no prediction of their predecessors. (Nadaillac Prehistoric People.)

The Scythians.

At an early date Scythia was a country of Northeastern Europe and Northwestern Asia.

Homer speaks of a race who were milkers of mares and cheese eaters, which corresponds with Hessiod's descrip-

tion of the Scythians. Heroditus describes the country as near 500 miles square.

Only a few of the tribes attended to agricultural pursuits and had fixed abodes. The greater part of them were nomadic and roamed about in their wagons, which served them for abodes.

They lived principally upon animal food. They were good horsemen and raised a great number of horses. In archery they excelled other nations. Hyprocrates describes them as a people having but little hair. The Scythian drank the blood of the first man he slew in battle and preserved the scalps and skins of his enimies he killed as trophies, showing a strong likeness to a part of the Indian race, especially in taking the scalps of his enemies, living on animal food and his not being disposed to an agricultural life. It is to be supposed that his having but little hair has reference to a scanty beard.

The Druids.

From what is known of the Druids, they resembled the angekoka of the Esquimo or the medicine men of the North American Indians. (Elton.) They practiced human sacrifice and augury whilst at some seasons of the year, human victims were crucified or shot to death with arrows, or they would be stuffed into huge figures of wickerwork or a heap of hay would be laid in human shape where men, cattle and wild beasts were burned in general holocaust. (Ellen Windle's Early Britain.)

The Malay Polynesian Race.

The Malay Polynesian race came from southeastern Asia (see American Cyclopedia) and occupied the islands adjacent and gradually extending their territory to the east, either exterpating the previous inhabitants or driving them into the interior. The emigration of the Polynesians from the Island of Booro may be fixed at 1,000 B. C. The island of Booro lies east of the island of Celebes and west of Papua or New Guinea. It belongs to that part of Oceania called Malasia.

The Yellow Race.

The principal characteristics which distinguish the individuals of the yellow race are high cheek bones, a lozenge shaped head, a small flat nose, a flat countenance, narrow, obliquely set eyes, straight, coarse, black hair, a scanty beard and a complexion of the greenish hue.

The Mongol branch has a large head, a flatter face and nose and smaller eyes than those of the other families. They have a broad chest, short neck, round shoulders, strong thick set limbs, short bow legs and a brownish complexion.

The Chinese branch of the Mongol race have a broad, coarse face, high cheek bones, heavy jaws, a flat bridged nose, wide nostrils, obliquely set eyes, straight and plentiful hair of a brownish black color, with a red tint, thick eye brows, scanty beards and a yellowish red complexion.

The Japanese are small, vigorous, active men, with heavy jaws, thick lips, small nose, flat at the bridge, but yet with an aqueline profile, their hair is somewhat inclined to be curly, have a large head, rather high shoulders, a broad

chest, a long waist, fleshy hips, slender, short legs and small hands and feet. The full face of those who have a very retreating forehead and particularly high cheek bone is rather square than oval in shape. The eyes are more projecting than those of Europeans and are rather more veiled by the eyelid. They have sleek, thick, black hair and some have a considerable quantity of it on their faces. The color of their skin varies according to the class they belong. From the sallow, burnt complexion of southern Europe, the deep, tawny hue of the native of Java, the most general tint is a tawny brown. The women are fairer than the men. Among the upper and even the middle classes, some are to be met with a perfectly white complexion. They have black eyes and white, sound teeth.

The Siamese of the Indo Chinese branch have rather a flat nose, prominent cheek bones, dull, unintelligent eye, broad nostrils, a wide mouth and the hair is black and coarse.

The Malay race is of medium height, regularly made with well proportioned limbs. Their skin varies from an olive yellow to a reddish brown hue, somewhat slanting eyes, prominent cheek bones, a flat nose, smooth, black, glossy hair and a scanty beard. The flatness of the noses is attributed to an artificial cause as immediately on the birth of an infant this feature is compressed until the cartilege is broken, for a broad, flat nose is considered a point of beauty.

The Polynesian family inhabits the entire eastern part of Oceania. Their complexion is olive, verging on brown, but not copper colored. They have sinewy limbs, tall in stature, high foreheads, black, lively and expressive eyes

and but slightly flattened noses, the lips are generally larger than those of the whites. They have handsome mouths and splendid teeth. Their hair is straight, long and black. They are experts in the management of their canoes and in swimming.

The eastern branch of the Negro race is called Melanesians or Oceania Negroes. Complexion is very brown, some times increasing in darkness till it reaches an intense black. Their hair frizzled, crisp, flaky and occasionally wooly. Their features disagreeable, their figures of little regularity and their extremities often lank. They live in tribes or small divisions. They are divided into two families—the Papuan and Andaman—and inhabit the New Guinea Archipelago. They have an enormous bulk of half-wooly hair. Their skin is a dark brown, their hair black, their arms, breast and legs were more or less covered with coarse, black, wooly hair. They have flat noses, thick lips and broad cheek bones, countenance not unpleasant. They practice cannibalism, also customs of immolating widows.

Effects of Heat.

Livingston claims in his travels in Africa that heat will not turn a people black unless it is combined with moisture; that the Bushmen in the Kalahara desert are much lighter in color than the Bushmen that live in the Zambesi river valley.

Wilson, in his work on western coast of Africa, says that the hill tribes are lighter in color than the coast tribes, the coast being low and swampy.

THE INDIAN.

Where the Indian Originated.

From the color of their skin, their straight, coarse, black hair, scanty beard, black eyes and high cheek bones, they are undoubtedly of Asiatic and Oceanic origin.

There is quite a difference of opinion as to where man originated. Some say Asia, some Europe and others, Africa. There is no doubt he started in a warm climate, as the great masses of mankind are either naked or scantily clad. The Bible account of Adam and Eve is that they started out naked.

Description of the Indian.

His complexion differs from the dark brown of the California tribes to the almost white of the Mandans and the Chinooks. The beard is scanty, except among the Athabascans and is prevented from appearing by the custom of plucking it out. The Indian has a dull, sleepy, half closed eye, with little fire unless when the passions are excited. The features are frequently regular and the expression noble. Many of the women are handsome. The skin is thinner, softer and smoother than in the white races. The practice of artificially moulding the skull was often adopted. The average volume of the brain as measured, is nearly 650 cubic inches. The crania is only 77 cubic inches for the semi-civilized and 84 inches for the barbar-

MOUND BUILDER.

Reproduced from a figure in my collection.

ous tribes. Dr. Morton, from a scientific examinataion of skulls from existing tribes and ancient tombs, considers the American nations, excepting the polar tribes, as of one specie and one race, but of two great families, which resemble each other in physical, but differ in intellectual character.

Cyclopedia Description of American Indian.

It first quotes from Lawrence, who gives as follows: Skin brown or cinnamon-hued, iris dark, hair long, black and straight, beard scanty, eyes deep-seated, nose broad but prominent, lips full and rounded and face broad across the cheeks, which prominent but less angular than in the Mongolian and with the features distinct. The general shape of head is square, with low but broad forehead, back of head flattened, top elevated, face much developed and powerful jaws, the placental region is much developed, the orbits are very large, the hands and feet small and well proportioned and the teeth white and sound, the facial angle about 75 degrees. The average stature is no greater than in other races. Muscular development is not great. (Taken from American Cyclopedia.)

HOW THIS COUNTRY WAS MOST LIKELY PEOPLED AND THROUGH WHAT CAUSES.

1st—By explorers from the coast of Asia, especially from China and Japan.

2d—Drifting when lost at sea, carried by sea currents with the trade winds blowing toward America.

3d—In case of invasion by the enemy in their island homes, when defeated they took to their boats and were compelled to try to find another habitation.

4th—In case of famine from drouths they were compelled to leave their island homes and try to find sustenance in another clime.

5th—In many cases of rebellion against oppression or other causes, the weaker party found another abode on some distant island, or in America, or in a watery grave.

6th—When the island became too densely populated, a part of the population was compelled to hunt for another place in which to abide.

7th—No doubt ambitious and daring men, that loved to rove with their followers, went out to explore the sea and find new homes.

The greatest aid in bringing people to this country were the sea currents and trade winds blowing toward America.

The Japanese or North Pacific current is very favorable to ships or boats drifting to America.

The most favorable route is a sea current starting in Micronesia, at the Gilbert island. It is about 150 miles wide and running along the north side of the Equator to America, a distance of near seven thousand miles and favored by the trade winds. This sea current divides near the coast of Panama, a part of it going north and part south. The part going north favoring the landing of the people on the coast of Central America and Mexico. The part south is favorable to a landing on the coast of Colombia, Ecuador or Peru. The cold Antarctic current sweeping the coast of South America south of Peru was not favorable to emigration, as it came from a barren, cold country, Micronesia and Polynesia lying along the Equatorial current, whose vast body of islands, no doubt, furnished many of the settlers of America.

There is no doubt that the first settlers of America were an amalgamation of many of the races of the Pacific, such as the Japanese, Chinese, Polynesian and Micronesian races, all belonging to the yellow race. Figuier describes the Chinese as of a yellowish, red complexion; the Japanese, of a sallow brown; the Polynesian an olive verging on brown; the Malay race from an olive to a reddish brown hue; the Mongols a yellow race. The American Indian approaches closely to the yellow races belonging to Asia. Their complexion varies from a yellow to a red copper color. The denomination of Red Race, Figuier says, is a defective one, as several tribes ranked in this group have no shade of red in their color.

The two Americas, eight thousand miles long from north

to south, caught all that drifted to its shores. When all of the habitable islands of the world are occupied by man, what wonder is it that large continents should catch its thousands?

Man first learned to build boats before he could navigate the seas and was well advanced in boat building before he could build one in which he could venture out upon the ocean.

Mr. Figuier says: "The New Zealand canoes were hollowed out of the trunk of a single tree and generally about 40 feet long." Mr. Lesson measured a specimen that was made in this way of one piece, the depth of which was three feet, the breadth four and the length sixty feet. These canoes are capable of holding about 40 warriors. The sails consisted of red mats coarsely woven.

The Tongas of the Friendly islands, says the same authority, make canoes that are of remarkable proportions, elegance and finish. They know how to manufacture cloth mats and reed baskets.

The Tahitians' chief work is the manufacture of cloth from various barks from the paper mulberry tree and the bread tree.

Capt. Cook, speaking of the Sandwich Islanders, found the warriors dressed with mantles of feathers and they had neat and elegant shaped canoes.

The Micronesian Islanders manufactured canoes and cloth. (Figuier.)

The Philipinos built junks, made of plaited bamboo, manned by a couple of hundred warriors and rowers, spread such powerful sails and possessed such speed that they were the envy of the Spanish ship builders. (Figuier.)

One thing that indicates that the Indians who first came to America were castaways, was the failure to bring the cereals, vegetables and domestic animals from the other countries to America.

The yellow races from both the islands and the continent of Asia have landed upon our shores and the combination has formed new races and new languages.

Take a few Esquimaux, Japanese, Chinese, Hindoos and Malays and put them upon an island and breed them together and in 500 years what would be their language and their physical makeup? The color of their eyes, hair and skin would not change much. Such a radical change as this could hardly take place, but in the first settlement of this country many thousands of years ago by cross-breeding, many changes may have taken place.

If the gulf stream had been reversed, no doubt the eastern part of America would have been settled by the white people that were grouped around the Mediterranean sea many thousands of years before Columbus discovered America.

WHO PEOPLED THIS COUNTRY.

It is often asked how this country was peopled. Why not ask how it could be otherwise peopled than from Asia, when the facilities are so easy for crossing over?

Take Behring Strait for instance. We find on the coast of Asia a tribe of war-like people resembling our Indians, called Chucchees, and across the strait in Alaska we find a part of this same tribe living and keeping up communication in winter by crossing on ice and in the summer, by canoe.

Then drop down to Japan. There we find the North Pacific current from one to six hundred miles wide, brushing the island and passing in a northeasterly direction along the edge of the Aleutian Islands, thence in a southeasterly direction until near the mouth of the Columbia river, where the channel divides, a portion running north, edging the coast of British Columbia for seven or eight hundred miles, the other and broader channel brushing the coast of California and Mexico for more than a thousand miles, together with the prevailing westerly winds blowing steadily towards America.

Mr. Brooks, Japanese consul, gives an account of forty-odd Japanese junks having lodged on the coast of California in fifty years.

Or they could have crossed at the Aleutian Isles in sail boats or by paddles to the southern part of Alaska, without

being out of sight of land at any time more than a few hours.

Whymper, in his Atlas, page 250, refers to Japanese wrecks and especially to one which, after drifting ten months, reached the Sandwich Islands. The Hawaiians on seeing the crew, said: "It is plain now we came from Asia."

At the present day natives of the South Pacific islands undertake, without a compass, and successfully, long voyages which astonish even the jack tar, who is not often astonished at anything. (Kennon in Leland's Fusang, pages 71-2.)

Or take the case of Capt. Bligh, who afterwards became admiral in the British Navy. In the year 1787, at the Otaheite Island, in the East Indies, his crew mutinied. They put Capt. Bligh and twenty men who were faithful to him, in an open boat, only twenty-five feet long, with only five days' rations for nine; water, bread and pork were thrown into it. He had a compass but no weapons, mast or sail and the gunwales were only a few inches above the surface of the water. With a pair of apothecary's scales, the captain measured the scant provisions of five days to make them last fifty, in which time he hoped to reach the Philippine Islands or Java, nearly four thousand miles distant. Favored by the monsoon and the stormless showers, they accomplished the voyage. (See Fountaine "How the World was Peopled," page 210.)

Captain Cook found at Watteoo three natives of Otaheite who had lost their ocean path and had been blown away five hundred and fifty miles from the land of their birth. (Fountain's, page 186.)

Kotzebue found on one of the Caroline Isles, a native of Ulea, who had been driven by the winds after a voyage of eight months to this spot, which was fifteen hundred miles from his native land. He and his companion had performed this remarkable voyage in an open, single canoe with outriggers. (Fountaine's, page 186.)

Commodore Perry, when in command of the Japan expedition, on his return voyage in the open West Pacific ocean, took on board a boat load of twelve savages who called themselves Lillibaboos. They could give him no intelligible idea of the island from whence they came. They were lost and were drifting before the wind.

The Malays of the Islands were a nautical and adventurous people. Their double canoes, made of the hollowed trunks of trees lashed together and furnished with outriggers, formed of light and bouyant logs of bamboo which grows from forty to fifty feet in height and eight inches in diameter, these attached to their gunwales, and projecting a considerable distance beyond their sides, can not be capsized. The bamboo is the gigantic bulrush. (Isaiah, 18 C., 2 V., speaks of sending embassadors by vessels of bulrushes upon the water, saying: "Go, ye swift messengers, to a land beyond the river Etheopia to a nation scattered," etc., showing that they used the same vessels to traverse the ocean two thousand five hundred and ninety years ago, that they use today.)

The inhabitants of the Polynesian isles embark with their families in their double canoes, supplied with their calabashes and angling implements, live upon the ocean far out of sight of land. Their greatest danger for want of a

compass is losing their reckoning and being carried by the sea currents and winds to some other lands.

Lyell, an extensive traveler and a man of science, remarks in his Principles of Geology, Vol. 2, page 121, that if the whole of mankind, with the exception of a single family occupying either of the two great continents or Australia, or even one of the coral islands of the Pacific were cut off, we would expect their descendants, though they should never become more enlightened than the South Sea Islander or Esquimaux, to spread in the course of ages over the whole earth diffused partly by the tendency of population to increase beyond the means of subsistence in a limited district and partly by the accidental drifting of canoes, by tides and currents to distant shores. (Wilkes' Explorations, page 163.)

In 1189, fourteen men sailed in a kayak (that was made together with wooden pegs and sewed with animal sinews) from the Greenland Cross Islands and safely landed in the haven of Briedafjord, Iceland. (See P. De Roos' America Before Columbus.)

Von Humbolt, in his views of Nature, refers to a canoe in the museum of Mariscal College, Aberdeen, Scotland, which was picked up by a ship on the Aberdeen coast, with an Esquimo in it still alive and surrounded by his fishing gear, that had drifted across the Atlantic ocean.

In Percy's Anecdotes, page 186, Mr. Powell, Commander of the Queen Charlotte, recovered from one of the Marquesas Islands, a man that had been a solitary inhabitant for nearly three years. The flesh and blood of birds were his sole aliment. With the latter he quenched his thirst in seasons of long dryness.

Capt. Joshua Slocum sailed around the world, a single handed voyage of 46,000 miles in the sloop, Spray. Her size as measured at the custom house was 40 feet long over all, 14 feet and 2 inches wide and 4 feet and 4 inches deep in the hold, his tonnage being nine tons, net. In crossing in the Pacific he sailed from Cape Horn to Juan Fernandes, thence to the Marqueas Island, thence to the Samoan islands to Australia, then taking advantage of the South Equatorial current going west.

We find nearly every island in the Pacific that is capable of sustaining life peopled by the Malay colored races and they are very much like our American Indians, man seems to have always been a migrating individual. America was a great barrier, reaching almost from pole to pole, catching the migrating and cast-a-ways.

I have written about the cast-a-ways that one might learn that a man could be blown about on the sea for ten months or more and a distance of thousands of miles in a small boat and not starve for water or provisions and how easily the trip could be made from China, Japan and other countries by following the North Pacific current with the winds blowing constantly to America.

When Man Came to This Locality.

Man came to this locality during the deposit of the last foot of red clay, a glacial deposit. In this deposit I find scattered about in a few places pottery balls in the shape described by Evans. Great Britain, page 373, Naidaillac Pre. Am., page 279, Dictionary or Class Ant., page 503, by Nettleship and Sandys.

These balls are shaped as only man could shape them

and most of them are burned to a red or yellowish color, many of them with the prints of the fingers left on them in shaping them, but so far I have not found a bone nor a piece of flint or pottery in this deposit, except the pottery balls.

On top of this red clay from naught to four feet in depth, is deposited a rich, black sand.

This country is three hundred and twenty feet above sea level. Dana and others show that in the Eocene period it was under the sea.

The nearest rock suitable for the mound builders to manufacture their tools out of is something like forty miles from here. The black sand in some places is rich in mound builders' relics, of which I have a large number, several thousand. I neither sell nor exchange, and have been accumulating for thirty years, and I have a great variety of them.

The time estimated as to the age of the glacial period is 200,000 to 300,000 years. The ice covered the country from the North Pole to the Ohio and Missouri rivers from one thousand to six thousand feet thick in the United States, draining lower Central Canada down the Mississippi river into the Gulf.

It is estimated by Mr. Frederick Wright that it has been 7,500 years since the ice of the Glacial period melted and passed away at Niagara Falls.

Many of the surface finds of relics in this county show fine workmanship. Their chipping was carried to perfection in the manufacture of hoes and spades, their scrapers being grinded on one side and chipped on the other, giving them a smoother cutting edge. Their work was fine in picking out the inside of their whirls. Their drilling was quite perfect

not only in the depth, but straight through the hardest of rocks, and some very small holes were drilled. In making their pottery they showed great skill. They kneaded into their clay different materials. They ground up the broken vessels for some mixtures, ground shells for other mixtures, red ochre for others, yellow ochre for some and black carbon for others, and white clay or chalk for some.

Their pottery was all baked, rarely heated to a red heat, some was thick and occasionally it was delicately thin. The lines some drew in painting their vessels were straight and of uniform width and many of their drawings showed skill.

The working of Flour spar was done very perfectly. It is four in hardness, quartz being seven, would readily cut it down. A little owl I have shows great skill in forming its ears, legs and rudiment of wings and its perfect symmetry.

Ashes is a preserver of bones. I have taken bones out of ash heaps that I believe had been in them for hundreds of years, that looked fresh and still retaining some elasticity.

The animals the mound builders lived upon, from the bones found in ash heaps, were mostly deer, coon, rabbit, squirrel; also large bird and fish bones were noticed. The large animals, such as buffalo, elk and bear, I presume the meat was cut away and the bones left where the animal was killed. My half-sister's grandfather, who lived and hunted in West Tennessee, about the time Davy Crockett resided there, told me that in bear hunting, when he killed one he would skin the bear, then sew up the skin, making a bag of it, then cut the meat from the bones and place it in the sack and leave the bones in the woods.

The bones of the buffalo, bear and elk would be burdensome to be carried any distance on the shoulders of man and leaving them in the woods would account for not finding them in the ash heaps.

CONSTRUCTION OF MOUNDS.

The Aborigines of Mississippi County, Missouri, built mounds at a very early date after their arrival and made them out of the material then at hand and they continued to build as long as they were in the county.

Most of them are small and were built of the light red or white clays, since which time the sands on the high lands have settled around these mounds, leaving no trace of where the dirt came from.

The greater number and larger mounds were built in modern times and it is plain to be seen from where the dirt came of which they were erected. One of the largest mounds in this county was left in an unfinished state. It is of a quadrangular form, sixteen feet high on the south side and twenty-one feet high on the north side. On top of the mound it is one hundred and sixty feet long and one hundred and ten feet wide. It is five feet higher on the north side and a part of the last dirt has disseminated all through it, pieces of brick from the size of a small shot to pieces as large as a man's fist. It was dug up at some place about the camp and carried up and deposited on top of the mound. This brick is smooth on one side and rough on the others, as if it might have been spread upon the ground. It was made of mud and coarse grass thoroughly mixed and burned after being spread and was not used to plaster the building as there is no sign or imprint of lathing of any description. It is generally about two to three inches in

thickness. I have something like a bushel of pieces three to six inches long and three and four inches wide. I have pieces of plastering from one inch wide to three inches long and from one-half to one inch thick with no grass mixed with it. One side is smooth and slightly concave, the other has a perfect imprint of cane that has been split in the center and placed close together. But how this plastering became burned to a red color, is something I do not understand, unless after the plastering was taken off of the building they used it to build their fires upon and after being burned in that way it became scattered about. The most that I found was in a circular depression about 25 feet in diameter and about a foot in depth in the center. It was scattered about through the earth for a foot or more in depth, but it was not mixed with the ashes, charcoal and bones that I found in the center of the depression.

The earliest built mounds were made of the clay strata and the latest on the higher lands of the black sand and the latest in the river bottoms of the black clay and sandy loam.

Near the mounds is sometimes a hole in form of a cone reversed, from five to ten feet deep, that I claim is a sloping well used by the Indians for drinking and culinary purposes. The dirt was used for erecting mounds and digging a sloping well at the same time. Some of their camping places were out of reach of water, especially during a drought, compelling them to resort to this means to obtain it, as water is near the surface in this locality.

The mounds and villages were built mostly at the joining of the high and low lands where wood and water were at hand.

The mounds of this county are conical and quadrangular. The conical is the form of the oldest mounds, as shown by their being, in most cases, no trace of where the dirt came from that built the mound, while near the quadrangular mounds are still large cavities or pits in close proximity to the mounds. And one of the largest mounds in the county seems not to have been completed.

Sizes of Mounds.

Among the hundreds of mounds in this county, there is not one that resembles bird, beast or reptile.

There are hundreds of mounds or elevations from six inches to twenty-five feet in height and from fifteen to one hundred feet in diameter. Sometimes in groups of ten to fifteen, sometimes a single one, most always on the border of some lake, bayou, slough or pond. One of the large groups of mounds has an embankment thrown up enclosing ten or fifteen acres.

The fire beds, composed of burned earth, ashes and broken pottery, are covered with earth from eighteen inches to four feet in depth, showing that there were inhabitants of this county many ages ago.

I find it covered to the above depth where the ground is above the floods of the Mississippi.

The fire beds above spoken of are not always on the mounds but mostly on the level ground.

I have found some fire beds on mounds. One I found at a depth of three feet and under that about the same depth I found another, showing that the mound was built in layers, at different periods of time.

I find some of the mounds have scattered throughout them small pieces of broken pottery, showing the dirt was taken form around their dwellings.

Their burial mounds are generally from six inches to ten feet in height, but mostly from eighteen inches to four feet in height.

In the mounds they are generally buried from one foot to six feet in depth, mostly from two to three feet.

From appearances, they practiced scaffold burial. I judge this from the position of the bones, and sometimes quite a number are missing. Sometimes the skull, but generally it and the thigh bones are found lying together, the skull being placed a few inches from the leg bones. I have often found as high as four skulls together in one place. I found a mass of bones six inches in depth and eight or ten feet square and but few skulls.

Also two large pots filled with human bones. In one was two skulls, two or three of the larger bones, some ribs, a few of the back, feet, hand and arm bones.

One of the pots or urns I preserved, together with the bones. The other was destroyed by the man I had digging while I was in another part of the farm.

The bones were packed in the urn very closely and partly covered over with fragments of large vessels, one of the skulls filling the remainder of the open space. To the bottom of the urn was about four feet from the surface of the ground, but rather on the outer edge of the burial mound, surrounded by a large number of ordinary burials in two layers.

The burial urn is thirteen inches deep, sixteen inches

in diameter at its broadest part, the top narrowing to eleven and one quarter inches in diameter.

The pottery is generally well preserved when found in the sand but in the clay it is soft and has to be handled with great care.

INDIANS AND THEIR WORKS.

The mound builder had made considerable progress in the arts when he disappeared by the hands of the white man. Among the last of his race seems to have been the Arkansas and Natchez Indians, also Taensas and Yazoo Indians. The making of pottery, its beautiful symmetry, its well-proportioned human, animal and bird forms, accurately portrayed what they intended to imitate; also their imitating of pumpkins, squash, gourds, fishes, frogs, shells, etc.

The painting of their pottery was very creditable. The bands they drew around the vessels were very accurately drawn. The sun drawn upon some vessels was very creditably done, showing some degree of cultivation.

Their drilling of some of the hardest rocks was quite a credit to them and was as well done as the white man could do it with the advantage of all of his improved instruments.

His flaking of some of his implements was carried to perfection, especially in carrying a row of flakes across a five or six inch flint hoe, keeping the curves of the hoe uniform.

His carving of axes, hatchets, whirls, paint cups, pipes and ceremonial stones, are all creditably done and especially some of the flour spar jewelry would be hard to excel.

Then comes the polishing of his various implements, jewelry, and the like, which was done very perfectly, especially in the formation of his jewelry.

The dress of the women (judging from one image I

have) consisted of a long skirt that came to her feet. Two figures show a skirt coming to their knees. These garments, I presume, rested upon the shoulders, as there is no indication of a cord or belt having been fastened around the waist. Another figure shows the head covered with a shawl, reaching down near the eyes, also covering the mouth. There is one figure of a man that indicates dress; he is nude with the exception of a red breech clout painted upon him. The remainder of the body is painted with white stripes.

The hair was done up in many and various forms, also some very peculiar head coverings.

The carving and polishing of their large greenstone axes and their forms show considerable taste as well as usefulness.

Location of Some of the Indians on the Mississippi.

The Arkansas Indians lived some distance below the Ohio river. In 1699 they lived near the mouth of the Arkansas river.

The Tonicas Indians lived fifty leagues below the Arkansas, opposite the Red river.

The Taensas Indians lived twenty leagues below the Tonicas.

The Natchez Indians lived where the city of Natchez now stands.

The above Indians, I believe, once lived in this locality because of finding the mud and straw mixture, also the impress of cane in plastering.

Dress.

Arkansas Indians—The women and girls are quite naked. They throw around them a buffalo robe when they go out. They have a skin hanging down from the waist, reaching to the knees. Some have a small deer skin like a scarf. (Year 1699, Shea, page 75.)

Taensas Indians—On account of the great heat, the men go naked. The women and girls not well covered and the girls up to 12 years of age go entirely naked. (Shea, Down Mississippi, page 77.)

Tonicas Indians—(50 leagues below the Arkansas Indians). The married women are covered from the waist to the knees and the girls naked to the age of 12 and sometimes until they are married. Clothes after the fashion of fringes scarcely covering them. (Shea D. M., page 81).

Taensas dress in white blankets made from the bark of a tree. (See Shea, Dis. Miss., page 175.) Fans of white feathers. (Shea.)

The Yazoo women wear a petticoat, that is from the waist to below the knees (very decent). There is a fringe well worked as well as their mantle, either all uniform or worked in lozenges or in squares or in ermine, which they usually wear as a sash, rarely on the two shoulders. The women have a great tress of hair on the back, which hangs down below the waist, also they make a crown of it around the head. Sometimes the men and women have mantles of turkey feathers or of muskrat skins well woven and worked.

The Natchez women are clothed with a mantle that comes down below the knees. (Shea, page 141.)

The Houmas—The dress of the women is a fringed robe which covers them from the waist to below the knees. When they leave their cabin, they put on a robe of musk-rat skins or turkey feathers. They wear skirts of cotton that reach as far as the knees and over them, half sleeves of scraped deer skin. The shirts are open in front. They wear shoes. (DeVaca, page 157.)

The women cover the whole body. They wear shoes and buskins made of tanned skins. The women wear cloaks over their small under petticoats, with sleeves gathered up at the shoulders, all of skin and something like sanbenitos, with a fringe which will reach half way down the thigh over the petticoat. (Coronado, page 71.)

They wear long robes of feathers and of skins of hares and cotton blankets. (Coronado, page 92.) The women wear skirts that reach to their feet. (Coronado, page 153.) Shields interwoven with thread. (Ranjel, page 138.) Made cloth of nettles, flax and bark. (LaSalle Cavalier, page 28.) Cloth of feathers and hair of animals. (Cavalier, page 32.) Cloth of bird feathers and hair of animals. (Cavalier, page 38.) Mulberry cloth, Yazoo Indians (Shea, Gravier, page 134). Cloth with mantle (Shea, Gravier, page 141). Robe of turkey feathers, (Gravier, page 147). Dressed in white blankets of bark, (Shea, Membro, page 175).

Their bodies were wrapped in a white cloth over which was a kind of net with wide meshes in which were stuck feathers. (Nadaillac, Pre. His. Am., page 177.)

A mound near the great Miami river, Ohio, yielded several fragments of half burnt cloth. (Nadaillac, page 177.)

In Iowa copper axes wrapped in well preserved cloth.

In Illinois copper turtles were enveloped successively in a vegetable tissue. (Nadaillac, page 177-8).

Several gentlemen of the Davenport Academy, Iowa, recovered a number of copper axes, wrapped in mound builders cloth. (John T. Short, page 37).

American bottom, Illinois, on removing a mound, was found with copper relics wrapped in matting; nearest to the copper was a fine cloth of animal hair. (John T. Short, page 43).

The hair of the buffalo and other animals is manufactured into blankets. In the same manner they construct mats from flags and rushes. (Hunter, page 289, 290).

Beautiful fabrics of wool, grass and cotton made by the Comanches, Navajoes and Apaches and their modes of spinning. (W. W. Beach, page 252 to 360).

A copper ornament found by Prof. Putnam, near Nashville, Tenn., showed that it had come in contact with a finely woven fabric. (Ant. of Tenn. by Thurston, page 268).

Hundreds of vessels impressed with coarser grades of cloth and matting. (Ant. of Tenn., Thurston, page 269.)

Cloth.

The Panifmahaus and Ontotontas Indians made cloth of buffalo wool, also of nettles, wild flax and the bark of trees, in eastern part of Texas, 130 miles from the Gulf of Mexico. (Shea, M. V., page 28.)

The Senis Indians, near the above, made cloth of feathers and hair of animals. (Shea, page 32.)

The Yazoo have a strong thick cloth of mulberry bark they spin like hemp or flax. (Shea, E. M. V., page 134.)

We also saw many deer skins and among them mantles made of thread of poor quality. Indians who wore feather bushes. (A. N. C. DeVaca, page 25, years, 1528 to 1536.)

And gave us many cloth blankets. (DeVaca, page 153.)

Presents of much cloth and turquoises. (Coronado, page 41.)

They raised much cotton. (Coronado, page 181).

The Toltecs could spin, weave and dye cloth. (See Nadaillac, Pre. Am., page 276.)

Description of Looms.

See Hunter's work, page 289 and 290.

See old Scottish loom. (Part in present Mitchell, page 29).

DuTratz describes the process of weaving practiced by the Natchez Indians. (Ant. of Tenn., by Thurston, page 268).

In Mr. Houck's History of Missouri, page 141, is an order by Penalosa which provides that Indians shall not be employed in spinning and weaving without Governor's license.

Felling Trees.

The Indian had two methods of felling trees. One was to burn the tree down, the other was to maul it down with stone mauls. An account of the felling of the tree is given in Stephen D. Peat Magazine, by a Californian in the early

days of crossing the plains. The tree was selected, the Indians gathered their mauls and pounded upon the tree until the outer part was mashed and broken into splinters. They then took stone chisels and broke out the splinters until the tree fell. The village took part in felling the tree, but no part in digging or burning out the dugout. The man and his wife did that.

Houses.

The walls of the houses of the Taensas Indians were made of earth mixed with straw. The roof is of canes, which form a dome, adorned with paintings. (Shea, History of Mississippi, page 175).

The Tonicas' houses were made of palisades and earth. (Shea, page 80).

The Tyacappen Indians, not far from where LaSalle was killed, in Eastern Texas, built their houses with canes which were interlaced and plastered.

The cabin of the Yazoo are round and vaulted. They are lathed with split canes and plastered with mud from bottom to top within and without, with a good covering of straw, no opening but the door. (Shea).

Fence.

The fence encloses the town. The fence was of large timber sunk deep and firmly into the earth with many poles the size of the arm, placed crosswise with embrasures coated with mud inside and out. (Elvas page 85.)

Came to an old village with two fences and good towers and turrets. These walls are made by driving many thick,

tall, straight stakes in the ground close together. These are then interlaced with long withes, then overlaid with clay within and without. (Ranjel, page 115).

The town was well stockaded and a ditch with water and fish around it. (Ranjel, page 139.)

Beds.

The Yazoo's bed is of round canes raised on four posts, three feet high, and a cane mat serves as a mattress. They have little glazed pitchers. (Shea, E. M. V. page 135).

Nursing Children.

Children are nursed to the age of 12 years, when they are old enough to gather their own food. (DeVaca, page 117).

Chichimecs of Mexico suckled their children till they are six or seven years old. (Nadaillac, Pre. Am., page 281).

Food.

The Arkansas Indians had an abundance of corn, beans and squashes. (Shea Early Mississippi Voyage, page 73, year 1699).

The maize in pots closed which they had buried for concealment. (DeVaca, page 170).

Presented us with a large number of turkey cocks with big wattles, much bread, pine nuts, corn meal and corn.

The Chichamecs ate wolves, pumas, weasles, moles, mice; failing these they ate lizards, snakes, grass-hoppers and earthworms. (Nadaillac Pre. Am., page 279).

Mortars or Grinders.

They had many vessels for grinding maize. (A. N. C. DeVaca, 1528 to 1536, page 25).

The Mexicans used a metate with its neatly shaped bed and rolling pin of lava to crush the maize. (Taylor's Anthropology, page 201).

The mealing trough, six feet long, two feet wide, eight inches deep, was divided into two or three or more compartments. In each compartment is a stone about eighteen inches long and a foot wide, set in a bed of adobe, inclined at an angle of 35 degrees. The upper stone is about fourteen inches long, three inches wide and varies in thickness, according to the fineness of the meal desired. The larger stone is a mata and smaller a mataka. The woman places the corn in the trough, grasps the mataka in both hands. This she slides back and forth over the mata at intervals. She places the material to be ground on the upper end of the mata. (Coronado, page 100.)

Mr. James F. Brooks, of Cape Girardeau, lived among the Kickapoo Indians when he was a boy. He is now an old man. The Indians needed a wooden mortar in which to pound up some hominy. They selected a tree of the proper size, then went to work like their grandfathers built mortars. They marked the height they wanted to build the mortar, they then plastered the tree with a thin coating of mud from this mark down, say twelve inches, then took vines and wrapped around this mud, and on this they put another coating of mud, keeping the top of the mud level or cupped up so as to hold fire and prevent it from rolling off. They sloped the bottom plastering out grad-

ually thicker until they carried it to the top. Then all around on top of this shoulder of mud they built a fire and kept it burning until the tree was burned down. If the mortar was not deep enough they continued to burn until it was of sufficient depth. The mud was used for two purposes. One was a foundation to build the fire upon. The other was to govern the fire and prevent burning where it was not needed. Mr. Brooks saw this done by the Kickapoo Indians of Kansas.

This same method of burning down trees can be used in burning down all of their rafters, studding and palisade timbers; by using mud they could govern the burning and burn timbers suitable lengths for their purposes. They could have twenty trees or more burning at once if they wished to do so.

The Pestle.

I have described the mortar; next is the pestle. This was made of hard wood, a round stick of timber about four inches in diameter and three feet long, one end round, to fit the bottom of the mortar, the other end attached with bark or a strip of hide to the top of a pole that was strong enough to lift up the pestle after it was pulled down to mash the corn. A small sapling growing near the mortar, if in the proper place, is selected, if not, a pole of the right size, of hickory, if they can get it, is set in the ground about three feet at the proper distance from the mortar.

Pots.

The Tounika or Yazoos have in each cabin a great post that supports the roof, at the foot of which there are two or three little earthen pots near the fire, out of which they

take a little ashes to put into these pots. This is the post of the spirit or Genii. Nothing could be learned from the Indians about the superstition. (Shea, E. M. V., page 134).

Natchez Indians in their temples have a number of little earthen pots, platters and cups and little cane baskets, all well made. This is to serve up food to the spirits of the deceased chiefs. (Shea, D. M. page 139).

Flint Knives.

Seizing the flesh with one hand and with a flint knife in the other they cut off mouthfuls. (Coronado, page 194).

Carrying Water Over Deserts.

In crossing a desert region they take with them women loaded with water in gourds, and bury the gourds of water along the way to use when they return. They travel over in one day what it takes us two days to accomplish. (Coronado, page 37, year 1699).

Bow Strings.

The strings of their bows are made of deer sinews. (DeVaca, page 121). The sinews were partially dried, then beat or mashed up to a fineness, then pulled apart and twisted into a cord, making a fine bow string.

2d. Take a gut of a deer, clean it nicely and twist it into a cord. It makes a fine, strong cord.

3d. Take a strip of hide of deer or other animal that is not too thick, cut it into a strip and twist into proper form.

The above were all used by the Indians for bow strings.

I have a lot of sinews that I beat up and pulled the fibers apart; when I finished it, it looked like a bunch of cotton. It was then in shape to be twisted into such size cord as you wish to make.

Running.

They run from morning till night in pursuit of a deer, and kill a great many because they follow the game until it is worn out, some times catching it alive. (DeVaca, page 91). Colonel Smith and Tontileango, one of his adopted brothers, attempted to run down and catch three horses. They stripped naked except breech clouts and moccasins. They started the horses about sunrise. Smith lost sight of the Indian about ten o'clock, but the Indian continued the race until about an hour by sun in the evening and gave up the race. As this was about the first of April, the Indian made a continuous run of about twelve hours. He failed to run down the horses, but claimed to have run down bears, buffaloes, elk and a deer, but could not run down a wolf. This running of wild animals was done when there was a small snow on the ground and no doubt this was one of the primitive methods of catching game before the invention of any weapons.

The Arrow.

To make one of proper size required a sprout four or five feet long. This was cut the required length, then the bark was pealed off by using a flint with a notch in the end or side of it. By drawing the arrow shaft through this

No. 8. SPEAR AND JAVELIN.

Fig. 1. Spear to be retained in the hand in combat with man or beast, the barbs are short and when driven into the body not likely to hang in pulling it out.

Fig. 2. Javelin to be thrown at man or beast, with long barbs to hang and impede the progress especially of an animal that can be overtaken and slain.

notch it scraped the bark off. Then, if the arrow had any crooks in it, it must be straightened. A cord was tied to one end of the shaft and tied to a limb of a tree or to anything so the arrow would hang down, then a heavy weight was tied to the other end of the shaft. This pulled the bows and crooks out of it, and it was left to hang until it was seasoned and dry before it was taken down. Then, when taken down, if there were any knots or rough places on the shaft they were rubbed off with a sand rock. Then the arrow shaft was split and scraped down to a point, ready for the insertion of the flint point. The war arrow point tang was dipped into glue and then inserted into the shaft, then a string of sinews or hide was tied above the arrow point. When this string dried it contracted and became hard and held the wood to the point very tightly. Next a notch was cut in the end of the shaft for the bow string to work against. Then a quill of some large bird had to be trimmed and fitted and tied to the shaft so that when the arrow is shot it would rotate and go with more accuracy.

The Indian found, on his hunting trips through the woods, sprouts suitable for arrow shafts. Major Brooks saw the Indians in Kansas suspend their shafts with a weight tied to them to straighten them.

Shooting With Bows and Arrows.

There were men who swore that they had seen two oak trees, each as thick as the calf of a leg, shot through and through by arrows. I, myself, saw an arrow that had penetrated the base of a poplar tree for half a foot in length. (A. N. C. DeVaca, page 39).

Their bows were thick as an arm, and from eleven to twelve spans long, shooting an arrow at 200 paces with unerring aim. (DeVaca, page 32).

A Teys shot a bull through both shoulders with an arrow. (Coronado, page 71.)

The invention of the bow was ascribed to Apollo, the God of fine arts. His splendid temple was built in 1269, B. C., at Delphi. The eastern nations were expert in archery. Astor of Amphipolis, upon being slighted by Phillip, King of Macedonia, aimed an arrow at him. The arrow, on which was written, "Aimed at Phillip's right eye," struck it and put it out and Phillip threw back the arrow with these words: "If Phillip takes the town, Astor shall be hanged." The conqueror kept his word. The bow was known in England previous to A. D. 450. The usual range of the long bow was from 300 to 400 yards. The length of the bow was six feet and the arrow three feet. I will quote from George Agar Hansard's book on Archery. The bolt shot by the English at birds and small animals was blunt-headed, corresponding with the Indians' stunning arrow used for the same purpose.

Some young Tartars, assembled under the window of the Margravine of Auspach. At fifty paces they broke an egg, and killed a goose at one hundred.

The Tawney Indian hunter works at his bow from day to day, scraping it into form with a flint stone or the sharp edge of a sea shell. He next manufactures a string tough and strong from the entrails of a deer, or a thong of hide, carefully twisted for his arrows. He picks out a number of straight young sprigs, takes off the bark with a tool fashioned for that purpose, of which I have a few; then, with

a sand rock he dresses them smooth and nicely. The notch in the arrows he cuts with a beaver's tooth, set in a small stick. He then coils the feather around the arrow and fastens the ends. This is to make the arrow revolve in its flight.

If the arrow is to kill game, a game arrow point is inserted by splitting the arrow, cutting a groove around the arrow and tying it securely. If for war, the string is tied behind the points so that in pulling the arrow out of the wound, the point will remain in the wound and work to some vital point and prove fatal. On the field of the Cloth of Gold, Henry the Eighth of England was requested by the French monarch to exhibit the skill and vigor with which Englishmen wielded the long bow and cloth yard arrow. Henry was then in the bloom of youth, a figure of almost perfect symmetry. His height was considerably above six feet. With a bow of the finest Venetian yew, he repeatedly shot into the center of the white at the distance of two hundred and forty yards. The mark was four feet square.

Now, the mode by which the bowyers determine the powers of the bow. They either use the steelyards or rest the handle upon some ledge and suspend weights from the center of the string until the bend is three feet, the length of the arrow, then mark above the handle the number of pounds necessary to accomplish this and call it fifty, sixty or one hundred pound bow. Bows in England were made out of yew tree, an evergreen allied to the pine.

The Sultan of Turkey in 1798 drove an arrow into the ground 972 yards from where he was standing, measuring it in the presence of Sir Robert Ansley. The English practiced shooting at a mark 240 yards. Some thirty years or

more ago the young prince of Russia came over to this country to hunt buffalo, in company with General Sheridan, some soldiers and a lot of Indians, and the prince carried home with him an arrow that an Indian had shot entirely through a buffalo.

Colonel Smith, in his captivity with the Indians, and his adopted brother, Tontileango, were bear hunting. They found a large elm scratched by the bear climbing up, and a hole in the tree large enough for the reception of the bear. Tontileango climbed up and dropped some fire into the hole, which was about forty feet from the ground. He came down and took up his gun. When the bear came out it was too dark to see the sights, so he set it down by the tree, bent his bow, took hold of an arrow, and shot the bear a little behind the shoulders. Smith was getting ready to shoot, but Tontileango called to him to stop, as there was no occasion. With that the bear fell to the ground. Now, why did he carry that old gun around, making the woods roar and the wild game tremble, startling all nature with its reverberation, while the arrow made its silent swish as it wended its way to meet out death to poor Bruin. The gun has been brought to great perfection, but what was it when it was first produced?

Guns used first at the seige of Atros in 1414, at the seige of Rhegenin in 1521, introduced into England in 1521 by Henry the Eighth, into the low countries by the Duke of Alva in 1569. A bombard was the first gun, and was fired with a coal of fire or a slow match. A very crude weapon, no sights, and much inferior to the bow, but it made a noise, and that is what man wanted.

Sights came into use in 1640.

Flint locks in England in 1690.

Percussion locks in 1842.

At the battle of Wittenweiler in 1638 fired seven times in eight hours.

Imagine a gun without sights or flint locks, poorly stocked, firing once in one hour and eight minutes. It could be nothing but the noise that first introduced it, as man has always loved a noise.

The Indian's Faith In the Great Spirit.

While out camping with his adopted brother, Tontileango, Col. James Smith remained in camp one day and a Wyandotte Indian came to him and begged something to eat. Smith gave him a shoulder of roasted venison for which he was very thankful. That night Smith related the circumstance to Tontileango, who said that he did right, and asked him if he gave him sugar and bear oil to eat with the venison. Smith said that he did not. This angered the Indian greatly. "You have behaved just like a Dutchman. Do you not know that when strangers come to our camp that we ought always to give them the best we have?"

Smith made a trip with a visiting chief, Tecaughretanego, to northwestern Ohio and eastern Michigan. Tecaughretanego was an Indian of unusual intelligence. One winter Smith found himself, the chief and his little son, Murganey, forty miles from any other Indians. The old chief was taken down with rheumatism and depended upon Smith for game to live upon. After about two months, a snow fell with a crust upon it and they were threatened with starvation. After partaking of a broth made from the

refuse bones around the camp, Smith was greatly refreshed, and the old chief addressed him as follows: "Brother, as you have lived with the white people, you have not had the same advantage of knowing that the Great Being above feeds his people and gives them their meat in due season, as we Indians who are frequently out of provisions, and are yet so wonderfully supplied and that so frequently, that it is evidently the hand of the Great Being that doeth this, whereas white people have commonly large stocks of tame cattle, that they can kill when they please and also their barns and cribs filled with grain and therefore have not the same opportunity of seeing and knowing that they are supported by the Ruler of Heaven and Earth. I know that you are now afraid that we will all perish with hunger, but you have no just reason to fear this. I have been young but am now old. I have been frequently under the like circumstances that we now are and that some time or other in almost every year of my life, yet I have heretofore been supported and my wants supplied in time of need. The Great Being sometimes suffers us to be in want in order to teach us dependence upon him and to let us know that we are to love and serve him and likewise to know the worth of the favors we receive and to make us more thankful. Be assured that you will be supplied with food and that just in the right time, but you must continue diligently in the use of means. Go to sleep and rise early in the morning and go hunting. Be strong and exert yourself like a man and the Great Spirit will direct your way."

What wonderful faith. It he could have lived to this day and seen his tribe pushed out on the inhospitable barren plains with no game to supply their needs, no fields of corn,

with nothing but starvation constantly staring him in the face, might not his faith have been rudely shattered? (See Pioneer History of America, page 213. Account of Col. James Smith about the squaw making maple syrup, collecting the water in bark vessels, holding 100 gallons, and the frying of bear's fat and storing of the oil in vessels of dried deer skin.)

THE FLINT TOOLS.

The plow often turns them up and occasionally they are found in digging trenches and post holes. I presume they were put there for safe-keeping by the owners and lost by death of the owner, or by some other mishap.

The smaller, as well as the larger flints are generally turned up by the plow, then when a heavy rain comes it washes the dirt off of the flints that are near the surface, then by going over the ground you will find those that are exposed on the surface, but a well-trained eye is necessary to be successful. When there comes a big rain after plowing the ground, it will bring something to the surface, and I have walked for hundreds of miles in search of relics.

Exploring the Mounds.

In digging out the mounds I hired two to four men and furnish each with a spade and a probe, made of a quarter inch steel rod about three feet in length, with a handle on one end, leaving the other end blunt so it will not injure the pottery. I have the men commence to work on one side of the mound, first by probing the ground carefully to see if there is any pottery in the ground. I then have them probe carefully and throw the dirt behind them as they advance into the mound. When they find a vessel with the probe I let them dig as near to the vessel as I think safe. I then take a trowel and carefully work around and take out

the vessel and clean the dirt out of it with great care, as it is very easily broken until it becomes dry. There is very nearly the same difference that there is between a wet clod of dirt and a dry clod of dirt. The painted vessels have to be handled with greater care as the paint is easily rubbed or washed off.

There is a great deal written about leaving everything as found in a mound until a photograph is taken of the vessels, but I consider that an impossibility as the pottery is put in the mound at such irregular depths, sometimes one piled upon another, and so fragile and having to be handled with so much care that I consider the only safe plan is to carry each piece out to one side away as much as possible from the intrusion of outsiders and out of the way of the workmen, and also to leave some place to put the dirt. There is less danger of breaking the vessels to dig in from the side of the mound, as you can locate them better than you can in digging from the top, and it is much less difficult to get vessels out of a sandy mound than out of a clay mound. The sand, of course, falls away from the vessel, and it needs but little cleaning, while the clay sticks very tenaciously to the vessel, making it difficult to clean. The probe should be made of spring steel. I prefer the round rod, blunt at the end. A sharp rod will injure the vessel by punching holes through it. The rod will wear sharp at the end but have it cut off and keep it blunt; with a blunt rod you can feel it jar your hand when you strike a vessel in probing.

One of the finest mounds I excavated was not more than six inches or a foot in height. The pottery was mostly from two and a half to three feet in depth, yet some of it was

so near the surface that it was turned out by the plow. I took out of that mound about three hundred vessels. The mound was composed of a black sandy, loamy soil.

Some of the burial mounds are as high as ten feet, conical in shape, with a broad base. I saw a mound of this form that was said to have had two stratas of burial, one about three feet and one about six feet in depth. Some burial mounds are very small, containing not more than a dozen vessels. I do not know of anything being found in the rectangular mound except some pieces of mud and straw burned to a red color that had been dumped in near the top of the mound to aid in building it. Mr. Beane counted about two hundred mounds for Mr. Louis Houck in this county of Mississippi. I know of only four rectangular mounds, and the early explorers in the south found temples erected on some and the chiefs' residences on others. I own three of these mounds.

But few flints are found in the mounds. I do not think I found a half dozen flints in all the mounds I explored. The plow has turned up the great mass of flints I have gathered. On my farm is a mound about ten feet in height, with a very broad base. The eastern half is composed of sand, the western half is a black, sticky clay. It was a burial mound, but strange to relate, the burials were all on the eastern side in the sand, and none in the clay side.

The Indian, when first discovered by the white man, had carried to great perfection the working of flints, greenstone and many other minerals by flaking, picking, scouring and drilling, putting it into many forms both useful and ornamental. The Indians, in some localities, were to a limited extent, in the copper and iron ages. Mr. Morehead,

in his Prehistoric Implements, mentions the finding of the following articles of copper: Arrow heads, beads, bracelets, celts, crescents, drills, fish hooks, gouge, hair pins, knives, needles, ornaments, spear heads, spud, sword, which were all made by hammering while cold. They were ignorant of any process of fusing metals. The copper was taken from the mines along the shores of Lake Superior for 150 miles in length and from 4 to 7 miles wide. Copper relics are found from Maine to Florida and as far west as Kansas.

Iron Hematites.

Mr. Morehead mentions eight classes of hematites: celts, axes, the cone, plumet, eggshaped, perforated ornament, paint stone, eggshaped with flattened base.

Dr. Whelpley of St. Louis has, I think, the finest collection of hematites in the United States.

He has 175 hematite plumbobs.

300 hematite grooved axes.

300 hematite celts.

100 hematite cones.

3 hematite discoidals.

2 hematite pipes.

He has several hundred articles such as paint stones, balls, ceremonials, pendants, gorgets, discs, pestles, war clubs, cups, bars and beads, all made of hematite iron by picking, flaking and scouring.

A COMPARISON OF TOOLS USED BY THE INDIAN AND WHITE MAN.

It is said that the white man has gone out of the stone age. This is not so to some extent. Does he not cut glass with a stone, a diamond? Does he not cut paper with a bone knife? The Indian, I claim, was the inventor of the hollow drill. He used a cane with a rod fastened in it and on top of this rod was held a capstone. A bow was used to run the drill with, and sharp sand and water were fed at the bottom of the drill to do the cutting, leaving a core in the center as the hollow diamond drill does today.

The white man uses sand to polish the handles of his tools. The Indian used a sand rock to polish and smooth his arrows and other tools. The white man uses the whet rock to sharpen his iron tools. The Indian the same to sharpen his stone tools. The white man uses clay to make pottery, so did the Indian. He experimented with the clays, so did the Indian by mixing crushed shells with the clay and powdered pieces of pottery, mixed in clay; also red ochre in some, yellow ochre in some, and chalk in others. The white man uses sharp sand, water and a piece of hoop iron to saw marble. The Indian used a notched flint saw to saw bone and buck's horn, and no doubt sawed wood with the same. I have several buck-horn points that were sawed off.

The white man has iron chisels, the Indian stone ones. The white man has his mortar and pestle; so did the Indian. The white man tanned skins with the fur on them and with-

No. 10. BOW, SLING, ARROWS AND BALLS.

Fig. 1. Bow. 2. War arrows. Points fastened by tieing the shaft back of the point so that in pulling the shaft out of the wound the point will remain and if possible work to some vital point. 3. Game arrow. Point tied to the shaft around the stem so the point will come out of the wound with the shaft. 4. Sling. 5. Pottery sling balls. 6. Stone sling balls.

out the fur; so did the Indian. The white man had a spinning wheel; so had the Indian. The white man has a loom; so had the Indian. He made blankets out of buffalo wool cloth, out of the inner bark of the mulberry and flax-like cloth out of a nettle.

The white man mines in the ground for his material; so did the Indian. I was informed by Dr. Whelpley, of St. Louis, that on the side of the ridge near Mill Creek,about thirty miles above Cairo, Illinois, the Indians mined from one to thirty feet in depth for a mile along the ridge, for large flakes of flint. The white man made boats, the Indian made the perogue, the dug-out, the bark boat and the bull boat out of the hide of the buffalo. The white man made axes, hatchets and gouges; so did the Indian. The white man made fans of feathers; so did the Indian. I have a pottery handle of one. The white family is decorated with feathers; so was the Indian. The white man fortifies his country; the Indian his village.

The Indian domesticated the dog, the llama, and the wild turkey and brought to great perfection corn, potatoes, pumpkins, beans, squash, peppers and tobacco. He had three modes of grinding meal, the mortar, the rubbing stone and the roller. He wore his blanket around him so that in a fight he could throw it off and not be encumbered with clothing.

The white man uses the red and yellow ochres, black carbon, carbonite of lime for painting, and so did the Indian. The white man set these colors in his pottery by burning or baking; so did the Indian. I have several vessels painted with these colors.

The white man's horses went wild on the plains. The

Indians captured and domesticated them. The white man invented his alphabet. Sequoya, an East Tennessee Cherokee Indian, invented the Cherokee alphabet after patient years of labor in the face of ridicule, discouragement and repeated failure. He finally perfected his invention. Its great value was at once recognized and within a few months thousands of illiterate Cherokees were able to read and write their own language.

Passing of The Stone Age.

When the white man came to this country and traded to the Indian the gun, traps, knife, tomahawk, blanket and iron pot, the stone age passed into oblivion.

The whirl no longer spun the thread, the loom ceased to exist and flint went out of use. The man ceased to be a manufacturer and agriculturist and became a hunter and traded his skins for his necessities, often for firewater that made a wreck of him and his home.

Previously he had preserved the game but when he found a market for hides and furs, he slaughtered indiscriminately and by wholesale, and with the assistance of the white man, wild game has almost ceased to exist.

What a change has come over the Indian, from a frugal, careful, thoughtful man! Many of them became wrecks.

Hand Stones.

Throwing by hand was one of the modes used in many wars in ancient times. Homer tells of Diomede, son of Tydeas, siezing in his grasp a hand-stone, a huge affair, with which he struck Aeneas. He smote him violently

No. 1. CHIPPING FLINT BY STRIKING A BUCK'S HORN WITH A STICK.
Fig. 1. Buck's horn for chipping flint. 2. Club to strike the buck's horn.
3. Flint that is being chipped.

upon the hip and broke both tendons and tore off the skin. The hand-stone was much used at the siege of Troy.

Ajax knocked down Hector with a large rock. When he threw it he twirled it like a top, seriously wounding Hector at the above siege.

The hand stone was no doubt the primitive weapon and the first effective one that came into the hands of man. We can see with what accuracy a ball can be thrown by watching the base ball pitcher. Some men can strike with the force of 800 or 1000 pounds with their fists. If you had taken one of these muscular men in childhood and trained him every day to throw a stone, and his meals depended upon its accuracy he certainly would, after long training, throw with great force and accuracy. And a one-pound stone in the hands of such a person, at a distance of fifty or sixty yards, would be as deadly as a rifle. The stone would have to be as round as it could be made to throw with accuracy. I have several weighing from a half pound to a pound that I believe were chipped into form for that purpose.

Slings.

They began to throw stones at us with slings. (DeVaca, page 48.)

The Mayas used slings, spears, arrows and darts. (Nadaillac Pre. Am. page 269.)

The Chichimec of Mexico. Their weapons were bows and arrows, war clubs and slings, from which they flung little pottery balls causing dangerous wounds. (Nadaillac, Pre. Am. page 279.)

The Romans used the lead ball, the stone ball and the pottery balls in their slings. I have in my collection 230 pottery sling balls, several hundred broken pottery balls and 1,446 sling stones chipped into a globular form. The sling stone is near the surface of the earth and the pottery ball is found below the sling stone to a depth of five feet.

Whirls.

Whirls were made of many different substances and of many sizes. The very small ones were used to make fine thread, the large ones, coarse thread, such as their thread to make blankets out of. Some made of clay of different sizes and baked. They are from one-half inch thick to one and one-half inch in diameter to one and one-quarter inch thick to two and three-eighth inches in diameter.

The stone whirls are from three-eighths inch thick to one and three-eighth inches in diameter and from one and three-eighths inch thick to three inches in diameter, and made of many different kinds of stone.

Spinning and the Cup Stone.

The necessity of using a foot rest for the spindle is the heavy weight of some of the whirls and the need of a permanent place for the foot of the spindle. Nothing suits so well as the cup stone. I have used one of these for many years to illustrate the modes of spinning of the Mound Builders and find it a perfect foot rest. There were two modes of spinning—one with a foot rest and one without the foot rest.

The East Indians used a small shell as a foot rest for

No. 12. FOR TWISTING THREAD OR CORDS.
Fig. 1. Cord or thread. 2. Spindle. 3. Whorle. 4. Cupstone.

their spinning of the most delicate threads, so fine that the threads could not bear the weight of the small whirl and spindle.

Manufacture of Pottery.

In the manufacture of pottery, the Mound Builder first formed his vessel, and if he concluded to decorate it, he then used his flint knife with slight pressure, carving or drawing lines upon it, or if he should conclude to add the form of man, bird or beast to the outside of the vessel, these parts were formed separately and attached to the outside of the vessel by moistening the parts to be attached.

SOME HABITS OF THE INDIAN.

Perforating Various Parts of the Body.

And they have the nipple and lip perforated. (DeVaca, page 89.)

I have over thirty labrets, in the form of a stopper, said to have been worn in the lips as an ornament. I am certain that the saliva that would be absorbed by the pottery labrets would soon destroy them, butI have a few flour spar and other stone labrets that I don't think would be injured by the saliva.

Singing and Music.

Singing among the Arkansas Indians was accompanied by the beating of a drum made of earthen pots over which they placed a skin. They held in their hand a gourd with pebbles in it which made a noise and then chanted according to the sound of their drums. (See St. Cofine's Voyage Down the Mississippi, page 71, by Shea, year 1699.)

They carried perforated gourds filled with pebbles which are ceremonial objects of great importance. (DeVaca, page 129.)

The journey of Alvar Numez Cabez DeVaca across the continent, 1528 to 1536. Soon after starting, in or near Florida, he met a chief who was preceded by many players of flutes made of reeds.

Some flutes which have holes on which to put their fingers. (Coronado, page 154.)

Sacrifice Year.

When the Taensas chiefs die, as they have been more esteemed, the more persons they kill who offer themselves to die with him. Last year the chief of the Taensas died and there were twelve persons offered to die and whom they tomahawked.

When the Natchez chief died they put to death two women, three men and three children, strangling them with a bow-string, these wretches deeming themselves greatly honored to accompany their chief by violent death. (Shea, E. M. V., page 140.)

They put to death those whom they believed necessary to cook for and wait upon the chief in the next world. (Shea, page 141.)

Sickness and War.

The Arkansas Nation, once so numerous, were nearly destroyed by war and sickness. The small pox carried off the greater part of them about a month since. (Shea, 1699.)

Duties of Priest.

The husband buys a woman, then takes her to a chief who is considered to be a priest, to deflower her and see if she is a virgin. (Coronado, page 85.)

Divinities.

The Taensas Indians regard the serpent as one of their divinities. (Shea, page 77, year 1699.)

The Tournika or Yazoos acknowledged nine Gods. The sun, thunder, fire, east, south, north, west, heaven and earth. (Shea.)

The Sun.

The sun is what they worship the most. (Coronado, page 211.)

Chichamecs adored the sun as the supreme God, also worshiped lightning. (Nadaillac Pre. Am. page 280).

Every where east of the Mississippi the Indian was a sun worshiper. (Lucian Carr, Mounds of Mississippi Valley, page 38.)

Among the New England Indians Roger Williams tells us they worshiped the sun for a God. (L. Carr, M. of Miss. Valley, page 50.)

I have two water bottles with suns painted on each.

Painting.

I saw their faces, arms and breast painted. (DeVaca, page 210, year 1536.)

Paint their chins and decorate their eyes. (Coronado, page 69.)

Paint.

Found a stake post where the Indians were awaiting them with their bodies, legs and arms painted an ochre

WATER BOTTLE.

On which was painted the Sun, the God of the Mound Builder.
Reproduced from one in my collection.

black, white and yellow and vermillion in stripes so they appeared to have on stockings and doublets. Some wore feathers, others horns on their heads, face blackened and encircled with vermillion. (Elvas, page 108.)

I have a vessel in the form of a man on his knees of a yellow color with short, white, irregular stripes on his body and face and a red breech clout painted on him and holes for earrings in his ears.

Shields.

In the Mosque, a house of worship, of Talineco, there were breast plates like corslets and head pieces made of rawhide. Also good shields. (D. S. Ranjel, page 101.)

About 7,000 Indians with canoes got together to prevent the crossing of the Mississippi. All had shields made of canes joined so close, interwoven with thread, that a cross bow could hardly pierce them. (De Soto.)

Burial and Cremation.

Cremation among the Chichimecs was the general practice. Human sacrifices accompanied funeral ceremonies. Women were burned alive upon the funeral pile. (Nadaillac, P. A. page 277.)

Tonicas interred their dead, and weep over the grave of the departed and make a fire there and pass their hands over it. (Shea, D. M., page 81.)

They burned their dead. (Coronado, page 94.)

In this county they buried by placing the corpse on a scaffold and when the bones were denuded of the flesh they were placed in a burial mound.

Temples.

The Taensas Indians—They had rather fine temples, the walls of which are mats, seven or eight feet thick on account of the great number of mats one upon another. (Shea, page 77, year 1699.)

The Tonicas have a temple on a little hill. There are earthen figures which are their Manitous.

The Yazoos have a small temple raised on a mound of earth. (Shea, E. M. V., page 136.)

In all of these temples is an old man who keeps the fire burning all of the time.

The Natchez Indians—Their temple is very spacious, covered with cane mats which they renew every year with great ceremonies. There is no window nor chimney in this temple and it is only by the light of the fire that you can see a little. The door that is low and narrow must be open. The old man takes care not to let the fire go out. It is in the center of the temple, in front of a mausoleum.

There are three about eight or nine feet long, six feet broad and nine or ten feet high. They are supported by four large posts, covered with mats of cane in quite neat columns and surmounted by a platform of plaited canes. There is a large mat over the table covered with five or six cane mats, on which stands a big basket. It is unlawful to open this basket as the spirit of each nation of these quarters repose there. They say with that of the Natchez, in their other two mausoleums, where the bones of their chiefs are, they revere as divinities.

I saw a number of little earthern pots, of platters and cups and little cane baskets, all well made. This is to serve

up food to the spirits of the deceased chiefs. (Shea, E. M. V., page 138-140.)

Only the old men enter the temple to do the howling after kindling the fire. (Shea E. M. V., page 141.)

The first fruits of the harvest of corn is for the temple. (Shea, page 142.)

Torquemada alleges there were more than forty thousand temples in Mexico. (Nadaillac, Pre. Am., page 288.)

Ortis, the christian, was put to watching the Indian Temple. (De Soto, page 28.)

Temples on a high mound and much revered. (De Soto, Ranjel, page 101.)

Where the Indians Buried Their Dead.

Where did the Indian bury his dead, after the white man came? I have never been able to find the bones of an Indian outside of a burial mound, consequently they were, without doubt, buried in the mounds so long as they remained in this locality, which was some time after the white man came.

FOOD OF THE INDIANS.

The vegetable food of the Indian was raised by the cultivation of small patches of land in corn, pumpkins, beans and squashes. These he cultivated with a hoe made of flint, of wood, or the shoulder-blade of some animal, mostly of deer.

For meats, there was the buffalo, elk, bear, deer, coon, opossum, ground hog, rabbit, squirrel, beaver, otter, musk rat, wolf, dog, panther, wild cat, fox, swan, goose, brant, duck, crane, hawk, turkey, prairie chicken, quail, crow, black bird, larks, yellow hammers, sapsuckers, peckerwoods, wild pigeons, dove, wood cock, snipe, plover, water hens, paroquite, fish, turtle, terrapin, mussle, snail, frogs and crawfish.

In grains and nuts he found wild oats, acorns, hickory nuts, pecans, hazel nuts, yonkerpins and walnuts. Berries and fruits were plentiful. He had blackberries, dew berries, red haws, black haws, crab apples, persimmons, wild cherries, paw paws, ground cherries, May apples, wild onions, grass nuts, elder berries, grapes, fall and winter grapes and strawberries. For salads he had wild mustard, lamb's quarter, tongue grass, polkweed and other wild weeds. For teas he used sassafras root or spice wood. He made sugar from the sugar maple.

Meats were preserved either by smoking or jerking, which is a slow process of cooking; also all kinds of meats could be preserved by cooking, then packing it down in a

pot and pouring over it, so as to cover well, bear's oil, coon or opossum oil, covering it with the tallow of the buffalo or the fat of some other animal.

Pumpkin was cut in strips and hung upon poles to dry. Beans were shelled and packed away for future use.

Ears of corn were placed under shelter and when needed for use were generally parched and eaten whole. The parching of the corn makes it easy to grind into meal. By use of a pestle and mortar it can then be made into bread or the corn can be made into hominy. Berries were dried and stored away.

All kinds of nuts were saved. Grasshoppers were dried, pounded and put away for use. Bear and other fats were rendered and placed in vessels made of deer skin to be used as needed. Ashes were used as a substitute for salt. The meats were stewed, barbecued or broiled on the coals.

In the ash heaps are found the bones of many animals, birds, fishes and turtles, but more of the deer than of any other kind. The ashes preserve the bones so as to retain their color and some of their elasticity. The ashes also contain a large quantity of broken vessels, supposed to have been used in cooking, and also pieces of water bottles. These water bottles were more or less porous, the moisture passing through the bottle and evaporating, carrying off the heat and cooling the water it contained, which made it more palatable.

The Indian had no domestic animal in North America except turkeys and a wolfish looking dog which was used as a pack animal in moving. In South America they

domesticated the llama. The Arkansas Indians had droves of turkeys.

In Homer's Odessy, the bow strings were made of sheep gut, as shown when Ulysses destroyed the men who lay siege to his house in order to marry Penelope.

Indian Corn, Potatoes and Tobacco.

Three products of great commercial value to America. Corn or maize, the most important of the cereals, was improved and brought to great prefection by the Indians from a very insignificant plant. It was found in cultivation by the aborigines from New England to Chili. Its origin is supposed to be Central America. It certainly took a long time for the aborigines to acclimate a tropical plant to grow in the cold northern regions.

Potatoes, that are now of great commercial and culinary importance, are grown over the whole civilized world. The original vine was a worthless weed from which the potato originated after years of cultivation by the Indian. It was found growing wild by Von Humbolt far up on the Andes mountains, 15,000 feet above sea level.

Tobacco.—DeCandole claims that the home of the most analogous species, the probabilities are in favor of Mexican, Texan or Californian origin. When America was first discovered the plant was cultivated by the Indians in both North and South America, and now cultivated to some extent in most all parts of the world. Its narcotic influence seems to have a pleasant effect on most of the human race. It is a poisonous, filthy plant, shortening the days of many people who use it.

No. 3. MAKING FIRE

Fig. 1. Fire stick. 2. Drill bow. 3. Cap stone. 4. A piece of wood.

Origin of Corn.

The red man came to America and left behind him the fruits and cereals of Asia and other countries from whence he came, which would indicate that his coming to this continent was more of an accident than on purpose to reside here.

What a difference in his condition and that of the white man, who brought with him his domesticated animals, his grains, his vegetables and fruits.

How long did the Indian roam over the forests before he discovered corn, that grand cereal that the United States produces annually nearly 3,000,000,000 bushels?

When first found in Central America it was no doubt a plant that produced very few grains to each ear and was not fully appreciated until a grain was found parched, perhaps by accident.

This greatly improved the flavor and brittleness of it and no doubt the Indian that took the first grain of parched corn in his mouth fully appreciated it. It was then gathered and made use of wherever it could be found and as it became scarce in the forest, some Indian of superior intelligence planted a few grains and on coming to maturity he found some ears with more grains upon them than the others and what would be more natural than to save and plant from the ear that had the most grains upon it? This planting was no doubt done with the fingers and when the fingers became sore, or the ground too hard, he used a stick as a substitute for the fingers.

Then some Indian of close observation found that the corn grown in the loose, mellow soil with plenty of sunlight

was much superior to that which grew in hard ground without sunlight. Then he began to loosen up the ground, or soil, with his stick.

This was the first mode of cultivating the soil.

From the narrow stick they got a broader one, then from that to a shoulder blade of some animal, thence to a fine flint hoe and spade we now find.

When he found that he had to have sunlight to raise corn, he then began to deaden timber and open up small fields for the production of it. His experience in camping in the forest had taught him that fire would kill the green trees, so he built a ring of fire around each tree sufficient to parch or kill the bark of the tree. Then when the trees in the forest began to throw out leaves, he began to plant the ground with his corn and used the limbs as they fell from the trees as firewood.

Another mode of killing timber he could have resorted to, and no doubt did, was to beat off a ring of bark in the spring of the year with a stone, axe or stone maul, which is a quick and easy method of destroying timber.

No. 6. SAWING.

Fig. 1. Clamp to hold flint saw. 2. Flint saw. 3. Sawing the end off of a stick of wood.

INDUSTRIES OF THE INDIAN BEFORE THE WHITE MAN CAME.

Selecting a Site for a Home.

Selecting a site for a home means much. First, he must have a dry spot of ground on which to erect his house and to plant his garden of corn, beans, pumpkins, squash, tobacco and two kinds of gourds. The ground should be rich so it would produce abundantly. The garden should be close to his house, so he could protect it from the ravages of wild animals. A small heard of buffalo would destroy his garden in one night by eating the corn and tramping down the other plants. A bear in a few nights would make havoc of his roasting ears. The coon is very destructive to corn. He will climb the stalk to get the ear and his weight will break it down. A few coons will make mighty ravages in a corn field and the squirrels will come from all quarters to eat the ears. A flock of crows would soon destroy his corn crop and other smaller birds are equally destructive. Then the tobacco crop had to be watched with vigilance or the worms would destroy it.

Did you ever picture to yourself the Indian woman and her children out examining the leaves of the tobacco plant, killing the worms more than a thousand years ago? How do I know it? There is no doubt that man roamed over this country ages before he took to the use of tobacco. He found it a wild weed growing in Mexico or Southern Texas.

How did he get to smoking this weed? Well, I imagine that in camping out he built his camp over a well-matured tobacco plant and as the fire consumed the plant he inhaled the smoke and, no doubt, liked it. After that he would gather it and burn it and inhale the smoke.

Perhaps it was a long time before the pipe was invented, for these habits are not born in a day. On account of the heat of the fire he began to inhale the smoke through a reed or cane and in course of time one stuffed tobacco in the end of the reed and set it on fire and began to smoke. That was the first pipe. Tobacco is a tropical plant and was used when the white man came over to South and North America, except Uruguay and Paraguay. It took a long time, no doubt, to acclimate it and bring it into use over such a great amount of territory.

The next thing he wanted was water. A spring, a creek, a bayou or lake. Not only did he need water to drink and to cook with, but wanted fish to eat, so a bayou or lake near by was a convenience. With his spear and bow and arrow he would be enabled to capture many fish. In the fall the ducks, geese and brant would come in. With his bow and arrow he would kill many of these. In these lakes and bayous the muskrat, beaver and otter would make their homes. The killing of these would furnish the Indian with meats and warm furs for clothing. And in the summer when the deer fed at night upon the mosses that grew in these lakes he would take his canoe, his torch-light, his bow and arrow. His torchlight made their eyes shine like two balls of fire and enabled him to shoot with accuracy.

In warm weather this water was not palatable but his

No. 7. DRILLING STONE.

Fig. 1. Capstone. 2. Spindle. 3. Quartz drill or perforator. 4. Drill bow. 5. Stone that is being drilled.

water jugs were porus and when filled with water the evaporation carried off the heat making the water pleasant to drink.

Timber.

This was indispensable to the Indian. He used it for many purposes. He needed it to build a good fire to warm up his little home and render it comfortable for his wife and children; to cook his meats and vegetables; to jerk his venison and other meats; to parch his corn and bake his bread; to stew or broil or barbecue his meats; to boil his greens and his corn; to stew his pumpkin, squash and beans; to boil down his sugar water into sugar; to burn out his hominy mortar; to burn out and shape his canoe; to burn off and shape the poles to build his home.

Timber was needed to build his pole traps to catch coon and other small animals, to make his bows and arrows, his spear handles, his spade and hoe handles. His spindle was of wood, so was his loom.

He wanted nuts to eat—the acorns, walnuts, pecans, hickory nuts, hazelnuts, grapes, haws, pawpaws, Mayapples, persimmons. The nuts brought in the coon and the squirrel, sweet gum seed the wild turkey, the bear and the deer loved acorns. The opossum wanted pawpaws, and the coon was particularly fond of hack beries, so a great variety of timber added to his convenience, enjoyment and necessities.

He wanted poles convenient to build the frame of his house, long grass to thatch it with, good clay near by to build the walls of his house. He loved his home and his people and was ready to lay down his life for them.

Mode of Building.

The Mound Builder's mode of building his home of mud and straw points to a western and southern origin, where the rainfall is light and the air is dry, and no place fits these conditions so well as the western part of the United States and Mexico. The slight rainfall, and in many parts the scarcity of timber, would bring about the conditions necessary to use this kind of building material. Such building material, although used in this part of the country by the Mound Builders, on account of the heavy rainfall and it continuing for months, followed in the winter season frequently by freezing weather, was very destructive to the thatched roofs used by them, and surely caused frequent renewals of roofing.

Mud and straw mixed in a burned state, is found scattered about in this county near the surface. In some places not over four feet in depth; in other places lying close to the pottery sling balls. These balls are found in glacial sediments about a foot in depth in the red clay, and were in use for a long time until the pebbles began to drift to the bars along the Mississippi river. This river was a long time forming a well defined channel long after the ice had retreated from this country. They then abandoned the use of the pottery balls and shaped up the pebbles by chipping, making them somewhat round and near uniform size. Then when the forest vines and bushes grew up they either emigrated or they abandoned the sling for the bow and arrow.

No. 2. AGRICULTURAL TOOLS AND TOOLS FOR WOODWORK.

Fig. 1. Hoe with a handle. 2. Spade with a handle. 3. Hoe without a handle. 4. Spade without a handle. 5. Adze. 6. Hatchet.

INDUSTRIES OF THE INDIAN.

1. Deadening the timber on an acre or more by mauling or burning the bark of the tree sufficient to kill it.
2. Burning off the poles for the body of the house.
3. Burning off the poles for the roof of the house.
4. Cutting cane with a flint knife and splitting it to weave between the poles.
5. Laying plastering upon the cane inside and out. If of doby structure, grass was gathered and mixed with the mud and sufficient grass for a thatched roof.
6. The ground was dug up with a flint hoe or spade.
7. Corn, beans, pumpkins, squash and tobacco were planted and further South the potato and pepper were raised.
8. The cultivation of these plants with a hoe or spade.
9. A sloping well was dug in a drouth, there was no other way to get water in this part of the country.
10. A mound was built in form of a rectangle, on which a temple was erected.
11. A temple was built in which was kept a living fire.
12. A mound was built for the chief's residence.
13. A mound was built in which to bury the dead.
14. A mound was built with the altar on top to preach from.

15. Two mounds were built in Scott and Mississippi counties for lookout stations. They are tall, sharp, conical mounds.

16. Wood was gathered for fires to warm and cook with.

17. Game was killed. Buffalo, bear, elk, deer and turkey.

18. Fish were caught in traps, nets, by poison and by spearing, and with his bow and arrow.

19. Skins were dressed with the fur on and without it.

20. Whirls were made out of rock or clay to spin with.

21. Looms were built to weave their cloth.
and made into blankets.

22. Wool was picked from the buffalo hide and spun.

23. The inner bark of the mulberry was made into cloth; then clothing.

24. From a kind of nettle was made a cloth like flax.

25. Breech clouts and leggins and moccasins with blanket or dressed skins for the men.

26. The killing of the coon, opossum, squirrel and rabbit for food.

27. Skirt and shawl and moccasins for the women.

28. In the fall the killing of the geese, brant and ducks for food.

29. The killing of the bull-frog, turtle and gathering muscles for food.

30. The gathering in the fall of walnuts, hickory nuts, pecans, acorns, haws, persimmons, (strawberries in the summer) grapes, hazelnuts, etc.

No. 9. CHIPPING BY PRESSURE

Fig. 1. Buck's horn point about six inches long. 2. Clamp to hold the flint. 3. The flint to be worked.

31. Manufacture of pottery such as pots, water bottles, jars, bowls, burial urns, drums, and spirit vessels.
32. Manufacture of earrings and pendants.
33. Manufacture of labrets of pottery and stone.
34. Manufacture of beads of pottery and stone.
35. Manufacture of wampum made of shells.
36. Manufacture of marbles of pottery.
37. Manufacture of bottle and jar stoppers of pottery.
38. Manufacture of mortars of stone to make meal.
39. Manufacture of pestles of stone to pound corn.
40. Manufacture of rubbing stones to make meal.
41. Manufacture of stone rollers to make meal.
42. Manufacture of rubbing stones to sharpen stone axes.
43. Manufacture of whet rocks of sandstone.
44. Manufacture of grooved whet rocks of sharp sand stone.
45. Manufacture of axes of greenstone roughened at the top so the hand can grip it with more ease.
46. Manufacture of hatchets of greenstone.
47. Manufacture of chisels of flint.
48. Manufacture of gouges of flint.
49. Manufacture of adz of flint.
50. Manufacture of skinners of flint.
51. Manufacture of spades of flint.
52. Manufacture of hoes of flint.

53. Manufacture of spear points of flint.
54. Manufacture of javelin of flint.
55. Manufacture of game arrow points of flint.
56. Manufacture of war arrow points of flint.
57. Manufacture of perforators of flint.
58. Manufacture of knives of flint.
59. Manufacture of saws of flint.
60. Manufacture of scrapers of flint.
61. Manufacture of sling pottery balls.
62. Manufacture of sling stones and slings.
63. Manufacture of rattles of pottery.
64. Mining for flint.
65. Manufacture of paint cups and slabs of stone.
66. Manufacture of implements of pottery for games.
67. Manufacture of stone pipes carved.
68. Manufacture of pottery pipes.
69. Manufacture of carved images of stone.
70. Manufacture of conch shell pendants.
71. Manufacture of plumbs or sinkers of stone.
72. Manufacture of ceremonial stones.
73. Manufacture of small rubbing stones.
74. Manufacture of hammers of different sizes of stone.
75. Manufacture of cup stones.
76. Manufacture of round stones for war clubs.

No. 4. A DRILL.

Fig. 1. Capstone. 2. Spindle. 3. A joint of cane with sand and water fed to the bottom to cut the rock. 4. Rock that is being drilled. 5. Drill bow.

77. Manufacture of red paint from red ochre.

78. Manufacture of yellow paint from yellow ochre.

79. Manufacture of black paint from black carbon.

80. Manufacture of white paint from white chalk.

81. Manufacture of cap stones to hold on top of drill.

82. Manufacture of anvils of stone.

83. Manufacture of grooved maul of stone.

84. Manufacture of spools on which to wind thread.

85. Manufacture of copper tools.

86. Manufacture of smoothing stones.

87. "Mauling down" trees to make canoes by burning them out and dressing off the coal with stone axes and where thin enough, plastering with mud to prevent further burning.

88. Peeling the bark off of trees to make canoes.

89. Making troughs out of bark to hold sugar water.

90. Making baskets out of bark.

91. Making baskets out of straw.

92. Making arrow shafts.

93. Making spear shafts for game.

94. Making spear shafts for fishing.

95. Making javelin shafts for game.

96. Making strings out of sinews by pounding and pulling them apart and twisting them into a cord for bow strings.

97. Making headdress of feathers.

98. Making feather robes of feathers and cloth.

99. Making sugar from sugar tree sap.

100. Extracting the oil from walnuts.

101. Extracting the oil from acorns.

102. Jerking the meat to preserve it.

103. Rendering out the fat of animals and storing it in calabashes and skin bags.

104. Raising calabashes (gourds).

105. Making gourds of pottery.

106. Spinning all their leisure hours to get the chain filling to make their cloth.

107. Making traps to catch wild animals.

108. Worshipping God.

109. Running animals down on foot.

110. Making snow shoes.

111. Drilling of the hard rocks.

112. Sawing of bucks' horns.

113. Making bone awls found in ash heaps.

114. Making bone spools found in ash heaps.

115. Making other tools found in ash heaps.

116. Making flaking tools out of flint.

117. Making flaking tools out of bone.

118. Making flaking tools out of bucks' horns.

No. 11. DRILLING WOOD.
Fig. 1. Capstone. 2. Spindle. 3. Drill point. 4. Drill bow.

119. Pipe stems were made mostly out of corn cobs, (nothing fits the pipe so well).

120. Hatchet handles were made of wood.

121. Hoe handles were made of wood.

122. Spade handles were made of wood.

123. Tobacco was cured over the fire, most likely in the home.

124. The dog was domesticated.

125. The wild turkey was domesticated.

126. Corn or maize was cultivated in North and South America.

127. A bow for drilling.

128. Pumpkin was cultivated in North America.

129. Beans were cultivated in North America.

130. Squashes were cultivated in North America.

131. Pepper was cultivated in Mexico.

132. Irish potatoes were cultivated in Peru.

133. Sweet potatoes were cultivated in Brazil.

134. Llamas were domesticated in South America.

135. Ground up shells to mix with their clay to make vessels.

136. Ground up broken pottery to mix with clay to make vessels.

137. Use of red ochre in the clay to make vessels.

138. Used yellow ochre to mix in the clay to make vessels.

139. Used black carbon to mix in the clay to make vessels.

140. Used chalk to mix in the clay to make vessels.

The vessels were baked, not burned, to a red heat. A red heat causes the oxygen to combine with the iron in the clay and changes its color to a red.

Archery is practiced among the Indians, and is carried to great perfection. His bow was perfect in form, made with flint tools, scrapers, saws and a sand stone to polish it with. His arrows were scraped into form with a flint arrow scraper, then polished with a sand rock. One of their greatest inventions was to feather the arrow so that it would whirl and go straight from the bow. If not feathered it would not go with the same accuracy.

141. Cutting grass with a flint knife and thatching their buildings.

142. Forming tents of hides.

143. Forming tents with bark.

144. Getting out timber to palisade their villages.

145. Digging a trench to hold the palisades.

In this locality there is no deposit of rock fit for the making of tools except what was brought into this country by the Indian, as raw material, and chipped into form here as the chips are scattered over hundreds of acres and I have in my collection five bushels of chips that were scattered over my farm.

No. 5. CHIPPING FLINT.

Fig. 1. Hammer to chip flint. 2. Clamp to hold the piece of flint. 3. Flint in the Clamp.

The Indian praticed scaffold burial. The bones when denuded of the flesh were placed in the ground from six inches to six feet in depth. When found at the latter depth there has generally been two stratas of burial, each about three feet in depth.

It is rarely that I have found any bones buried but the leg bones and skull. These bones were placed in the ground in a natural position, horizontal, and the skull at the end of the bones, and in six inches of the bones, then generally about three pottery vessels are placed near the head, without much care as to how they are placed. Very rarely have I found a flint in a mound; not a dozen in all of my collection out of the thousands I have. The larger flints, hoes, spades and greenstone axes I find scattered over the country away from the mounds, and buried from six inches to two feet in depth and from one to six in a place, generally from one to two.

INDIAN RELICS

MY COLLECTION OF INDIAN RELICS.

In my work of exploring the mounds and examining the old camp sites of the Indians in Mississippi county, I have carefully preserved the relics and have them listed so that ready reference can be made to them. Plates of the relics are published in this chapter and the contents of each shelf are enumerated.

PLATE I.

CONTENTS OF PLATE I.

SHELF NO. 1.

4 Leg bones of human beings from the mounds.
2 Jaw bones of human beings from the mounds.

SHELF NO. 2.

6 Sinews from a beef, showing how they were used.
21 Pieces of pomice stone from old camping places.
Card No. 1—23 Scrapers, 1 piece grooved.
Card No. 2—18 Skinners.
Card No. 3—47 Points and varieties of stone, 1 piece of obsidian.
Card No. 4—51 Tanged scrapers.
Card No. 5—26 Tanged scrapers.
40 Roughly chipped flint of various forms.
115 Turtle backs and tanged scrapers.
26 Flaking stones.
17 Spades.

SHELF NO. 3.

Card No. 1—41 Perforators.
Card No. 2—23 War arrow points.
Card No. 2—42 Game arrow points.
Card No. 3—56 War arrow points.
Card No. 3—32 Game arrow points.
Card No. 4—27 Spear points, one polished.
Card No. 5—30 Spear and javelin points of different forms.
Card No. 6—45 One-tanged and strange formed spear points.
Card No. 7—11 Chisels.
559 War arrow points in 2 box tops; 15 are corrugated.
352 Game arrow points.
157 Perforators.
103 Points of different forms.
46 Half formed arrow points.
37 Sharp and pointed flakes.
51 Flakes used for saws and knives.
9 Arrow scrapers.
6 Spades.

SHELF NO. 4.

Card No. 1—27 Leaf-shaped flints, 2 inches wide.
Card No. 2—15 Leaf-shaped flints.
Card No. 3— 4 Knives of flint.

Card No. 3— 1 Four-barbed arrow point.
Card No. 4—12 Spear points.
Card No. 5—32 Spear and javelin points, many forms.
Various colored flints and other stones.
81 Javelin points.
126 Spear points to fit in socket.
355 Spear points of various forms and sizes.
4 Spades.
1 Mortar.
1 Pestle.
14 Pestles.

SHELF NO. 5.

Card No. 1—24 Pottery sling balls, ovoids.
Card No. 2—24 Round pottery sling balls.
Card No. 3—20 Oblong pottery sling balls.
Card No. 4—25 Pottery balls; imprints of fingers.
6 Spades.
12 Skinners, ground on both sides.
12 Skinners, chipped on both sides.
6 Scrapers, chipped on one side, ground on the other side.
2 Adz.
2 Implements for decorating pottery.
2 Cap stones to hold on top of rod in drilling.
2 Broad bladed skinners.
1 Piece of soft lime stone with owl marked on it.

SHELF NO. 6.

14 Ovoid sling balls.
1 Fish spear.
3 Ovoids and pieces found in side of ditch 2½ to 3 feet deep.
1 Sling ball and flints, found on Hunters' Ridge.
33 Sling balls and pieces found 5 feet deep, Brigsby's Field.
26 Round pottery balls.
61 Pottery balls, various shapes.
62 Pottery balls, various shapes.
120 Broken balls.
1 Piece, 3 to 4 inches thick, 10 to 14 long, of mud and straw burned.
51 Straw and mud burned pieces.
527 Pieces of arrow and spear points.
6 Broken spades.
1 Piece of scouring stone.
4 Boxes containing bones, charcoal and pottery from the center of the circular depression at my farm.

PLATE II.

CONTENTS OF PLATE II.

SHELF NO. 7.

6 Skulls.
1 Large pot, perhaps used as a drum.

SHELF NO. 8.

34 Leaf-shaped spades.

SHELF NO. 9.

19 Axe-shaped flint spades.
5 Leaf-shaped flint spades.
3 Paddle-shaped flint spades.
2 Diamond-pointed flint spades.
1 Spade.

SHELF NO. 10.

30 Pieces of pumice stone.
58 Whet rocks, sand rock.
103 Grooved whet rocks, sand rocks.
1 Globular whet rock, sand rock.
1 Grooved axe, light-colored greenstone.
26 Notched hoes, flint.
14 Off on No. 4.

SHELF NO. 11.

2 Spades, flint.
64 Hatchets, greenstone.
5 Axes, green-stone.
15 Skinners, flint.
2 Skinners that show great age.
2 Skinners of soft stone, lime stone.
1 Spear head with long handle, greenstone, known as Ceremonial stone.
1 Slate axe, edge broken off, one-half of edge flaked.
1 Chisel.

SHELF NO. 12.

5 Flint spades.
1 Piece of scouring stone.
1 Scouring stone 22½ inches long, 10 inches wide.
10 Roughly chipped flints.

1 Piece of flint 9½ inches long, 2½ to 1 inch broad, 1½ to 1¾ inches thick.
56 Small hand hammers.
7 Green stone axes.
1 Green stone gouge.
1 Piece of small gouge.

IN WINDOW.

1 Spade, handled.
38 Hammer stones.
1 Mortar.
1 Hoe, handled.
1 Grooved maul.

PLATE III.

CONTENTS OF PLATE III.

SHELF NO. 13.

1 Box with burial bones, 2 skulls, arm and leg bones, shoulder blade and a few other bones, found in a burial urn 4 feet in depth in the ground.
1 Burial urn.
1 Bowl in form of wash bowl.

SHELF NO. 14.

6 Pots with ears.
5 Jars.
6 Bowls.
10 Water bottles.
1 Form of human body.

SHELF NO. 15.

2 Pots with 2 ears each.
8 Bowls, 2 bowls with rattles.
5 Water bottles, 1 with rattle in the top.
2 Water bottles, form of owl.
2 Water bottles, human figure.
3 Jars.
4 Water bottles with heads.
1 Water bottle, human form.

SHELF NO. 16.

14 Human figures water bottles.
4 Human heads water bottles.
1 Head water bottle.
2 Jars.
4 Water bottles.
1 Water bottle, pumpkin shaped.

SHELF NO. 17.

4 Pots with ears.
9 Water bottles.
6 Bowls.
3 Jars.
7 Muscle shells found in burial mound.

SHELF NO. 18.

58 Sling stones.
52 Large flakes.
1 Roller for grinding corn.

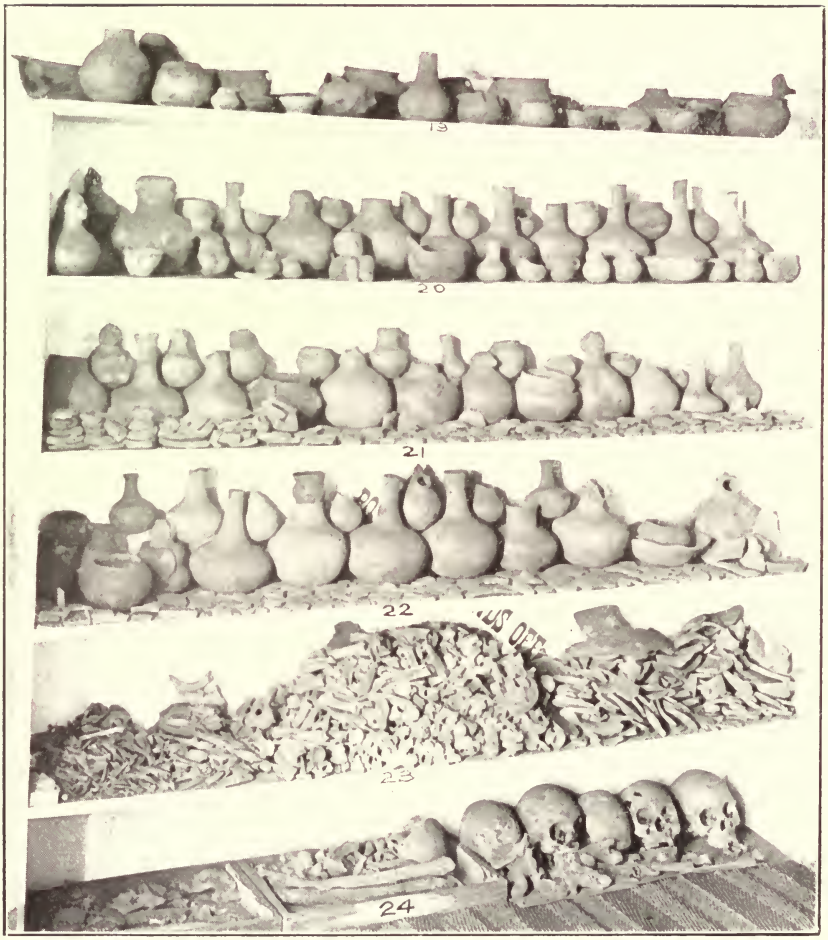

PLATE IV.

CONTENTS OF PLATE IV.

SHELF NO. 19.

10 Pots with 2 ears each.
1 Pot with 4 ears.
10 Bowls.
10 Jars.
5 Water jugs.
2 Vessels, unknown form.

SHELF NO. 20.

13 Water bottles.
3 Water bottles, human heads on bottle.
3 Water bottles, human figure.
6 Jars.
4 Pots.
4 Bowls.
4 Unknown form.

SHELF NO. 21.

1 Jar.
9 Bottles.
2 Pots.
43 Pieces of vessels showing mixture of shell, pulverized pottery, carbon, red ochre, yellow ochre, and thickness.
41 Pieces showing decorations.
137 Pieces showing lines carved on piece of pottery, cloth impressions.
1 Water bottle, top broken, 2 pot ears, 4 heads, 1 broken off.

SHELF NO. 22.

105 Pieces showing carved lines or impress of cloth; the lines were made with a sharp flake.
4 Bowls.
3 Jars.
2 Human figures water bottles.
4 Water bottles.
3 Water bottles with heads.
1 Pot.
1 Jar cross-piece on inside of mouth.

SHELF NO. 23.

1 Box ashes from ash heap.
1 Box burned hickory nuts, found in mound.

10 Mussel shells, taken out of ash heap.
5 Squirrel jaws, taken out of ash heap.
1 Rabbit jaw, taken out of ash heap.
12 Coon jaws, taken out of ash heap.
5 Skulls, small animals, taken out of ash heap.
19 Fish bones, taken out of ash heap.
1 Turtle shell, piece taken out of ash heap.
12 Pieces deer horn, taken out of ash heap.
25 Deer jaws and pieces, taken out of ash heap.
1 Piece buffalo jaw, taken out of ash heap.
1 Dog head, taken out of ash heap.
436 Coon, rabbit, squirrel and bird bones, taken out of ash heap.
921 Deer and other bones, taken out of ash heap.

SHELF NO. 24.

3 Bone burials.
1 Jaw, human.
1 Shoulder blade.
1 Burial of bones, human.
5 Human skulls.
10 Human bones.

PLATE V.

CONTENTS OF PLATE V.

SHELF NO. 25.

6 Pots.
7 Bowls.
3 Water bottles.

SHELF NO. 26

9 Water bottles.
3 Pots.
4 Bowls.

SHELF NO. 27.

5 Water bottles.
7 Bowls.
2 Jars.
1 Human figure.

SHELF NO. 28.

4 Bowls.
5 Water bottles.
1 Pot.
2 Jars.

SHELF NO. 29.

8 Water bottles.
6 Bowls.
24 Broken implements.

SHELF NO. 30.

9 Water bottles.
1 Pot.
2 Bowls.
1 Jar.

SHELF NO. 31.

10 Bowls.
1 Jar.
3 Water bottles.
23 Paint slabs.

SHELF NO. 32.

9 Broken top water bottles.

PLATE VI.

CONTENTS OF PLATE VI.

SHELF NO. 33.

1 Water bottle, human head on frog.
1 Water bottle, form of human head.
1 Water bottle, human figure with shawl on head.
1 Water bottle, human figure, bald-headed woman.

SHELF NO. 34.

1 Water bottle supported by 3 human figures in squatting posture, painted red with black rings around neck of bottle.
1 Water bottle in shape of turtle, painted in light color with white rings on the body, two around each leg, one around top of vessel.
1 bottle held up by three men in kneeling posture, with two heads missing, painted red.

SHELF NO. 35.

1 Bowl, 4 heads on side, rattles in each.
1 Bowl, animal with something in its mouth.
1 Bowl, animal head with tongue in circle.
1 Bowl in form of frog.
1 Bowl, animal with something in its mouth.
2 Muscle shells taken out of mounds.

SHELF NO. 36.

1 Nude carved figure of man, sitting, 11 inches high, with pipe and stem on his back, soft stone.
1 Nude carved figure of woman, sitting, 9½ inches high, with pipe on stomach and stem on back, soft stone.
8 Pieces of burned clay.
1 Large tooth.

SHELF NO. 37.

13 Pieces of broken pottery.

SHELF NO. 38.

2 Bowls, form of duck.
1 Bowl, form of fish.
1 Bowl.

SHELF NO. 39.

2 Water bottles with human heads.
1 Water bottle.
1 Water bottle, small, with head.

1 Bowl, with human head on edge of bowl.
1 Small water bottle in form of frog.
2 Small bowls in form of fish.
2 Bowls.

SHELF NO. 40.

1 Water bottle resting on three balls connected.
1 Water bottle resting on three balls.
2 Water bottles, human form.
1 Water bottle, owl resting on legs and tail.
1 Water bottle, owl head.
1 Water bottle with head pointed out.
1 Jar in form of fish.

SHELF NO. 41.

1 Bowl in form of frog.
1 Large low bowl.
1 Water bottle with man's head on it.
1 Water bottle in human form.
1 Water bottle with animal head on it.
1 Large pot with two ears.
2 Pots, with 4 ears each on them.
1 Small bowl with tail and head gone.
1 Small bowl, knobs on 4 sides, with 21 flint flakes in it.
1 Pot, form of moccasin shoe.
1 Pot with a cover and pebble inside of it.

SHELF NO. 42.

1 Bowl painted red.
1 Bowl with head and tail of bird.
2 Bowls, plain.
1 Pot, form of frog.
1 Pot, ridges below the rim, mussel shell in its composition.
1 Jar, broad top.
1 Part of water bottle, human form

SHELF NO. 43.

1 Large bowl, badly broken, with bones of the person as found in it, except the skull was lost.
1 Broken water bottle that rested on 3 balls.
5 Pieces of vessels.

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CONTENTS OF PLATE VII.

SHELF NO. 44.

2 Bowls in form of fish.
2 Bowls, plain.
3 Pots, plain.
5 Water bottles, some broken.

SHELF NO. 45.

2 Jars.
1 Bowl, plain.
9 Water bottles.
1 Water bottle with head.

SHELF NO. 46.

6 Water bottles, one in form of fish.
3 Water bottles with heads.
2 Bowls.
3 Jars.
1 Large jar.

SHELF NO. 47.

1 Pot with four ears.
4 Pots.
4 Bowls.
1 Jar.

SHELF NO. 48.

2 Jars.
4 Pots.
10 Bowls.
1 Water bottle with strange head.

SHELF NO. 49

2 Pots.
1 Pot with eyes, ears and nose of an animal.
5 Bowls.
1 Water bottle, part of top gone.

SHELF NO. 50.

2 Large jars.
4 Small jars.
2 Pots.
2 Bowls with human heads.
1 Bowl with bird's head.

1 Water bottle.
4 Bowls.
1 Ball broken off of vessel.

SHELF NO. 51.

1 Pot.
4 Bowls.
4 Jars.

SHELF NO. 52.

3 Bowls.
10 Jars.
4 Pots.
3 Water bottles.

SHELF NO. 53.

7 Bowls.
1 Bowl, form of fish.
2 Water bottles, one top broken.

SHELF NO. 54.

1 Water bottle on balls.
1 Water bottle, cup shaped bottom.
14 Water bottles, some broken.
1 Water bottle with head.
2 Jars.

SHELF NO. 55.

13 Water bottles.
1 Pot, globular formation on side.
1 Pot, nose, ears and eyes of animal on side.
2 Pots.
1 Bowl, form of fish.
1 Bowl.

SHELF NO. 56.

6 Water bottles.
4 Water bottles with heads.
1 Water bottle with man's head.
2 Jars.
3 Bowls with men's heads on them, one on each.
1 Bowl with bird's head on rim.

SHELF NO. 57.

3 Jars.
2 Pots.
1 Pot, eyes, ears and nose of animal on it.
1 Bowl, fish, fins, etc., on it.

1 Bowl, bird's head on it.
3 Bowls.

SHELF NO. 58.

4 Pots.
2 Bowls, bird's head on each.
1 Bowl, form of fish.
1 Bowl like a wash pan.
1 Jar.
5 Bowls.

SHELF NO. 59.

1 Water bottle, man's head on it.
2 Jars.
2 Bowls, wolf-like head on one.
2 Bowls, lamp-like structures.
3 Bowls.

SHELF NO. 60.

2 Jars.
1 Wash bowl.
4 Water bottles with head on each.
1 Water bottle.
1 Water bottle, human form.
6 Pots.
1 Bowl.

SHELF NO. 61.

14 Leg bones.
1 Bone with tree root grown through it.
8 Rib and arm bones.
8 Lower jaws, human.
1 Upper jaw, human.

SHELF NO. 62.

9 Skulls.
1 Water bottle.

SHELF NO. 63.

4 Bowls.
2 Pots.
5 Jars.

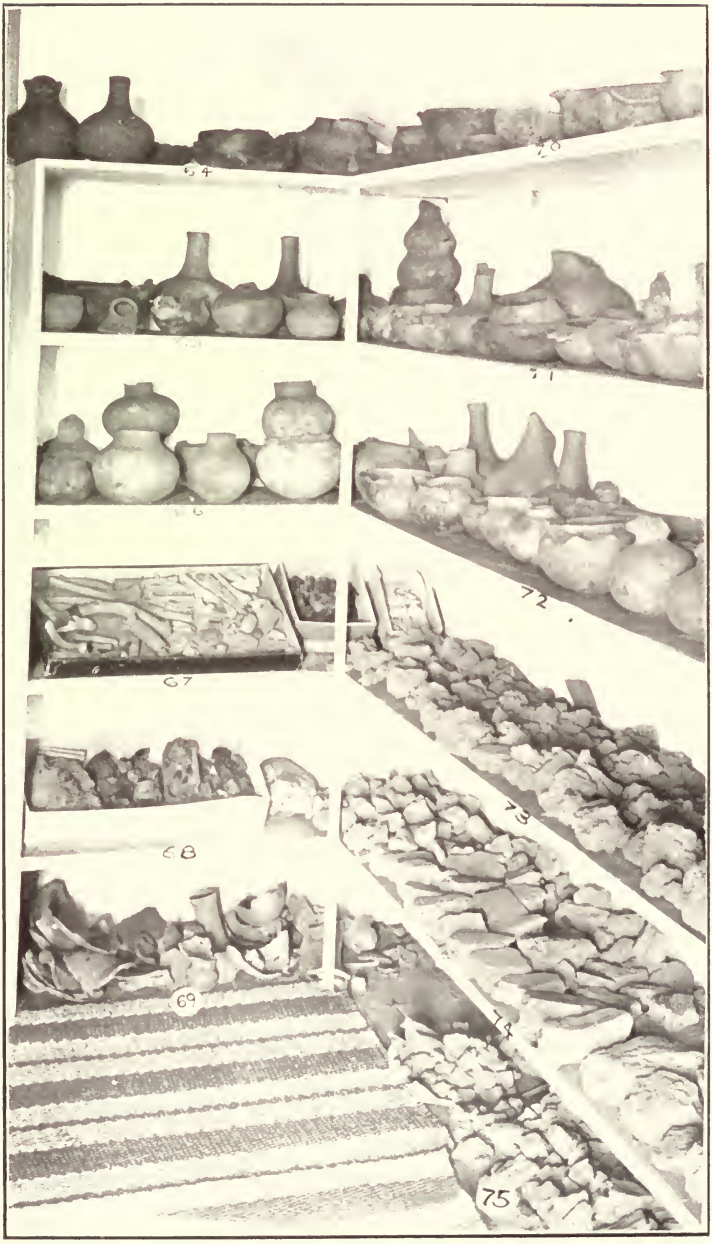

PLATE VIII.

CONTENTS OF PLATE VIII.

SHELF NO. 64.

1 Pot, frog.
1 Pot.
3 Bowls or wash basins in form.
1 Water bottle.
1 Water bottle, bear's head on it.

SHELF NO. 65.

2 Wash-pan-shaped bowls.
3 Water bottles; one top is broken off.
1 Jar.
1 Bowl.
1 Head of vessel.

SHELF NO. 66.

6 Jars.
1 Water bottle, man's head.
2 Pots.
1 Bowl.

SHELF NO. 67.

21 Shells found in ash heap.
1 Lot burned straw, believed to be thatch.
1 Lot fire coals, showing size of poles used.
9 Pieces of buck's horn, sawn.
14 Pieces of buck's horn, some partly burned.
2 Bone awls.
5 Bone tools.
5 Short pieces of bone used, perhaps, as spools.
1 Whirl.
1 Partly bored pipe of pumice stone.
1 Piece of pumice.
1 Grooved whet rock.
35 Bones and pieces, either mark of tools or chewed by animal.
1 Pottery buck's horn.
14 Fish bones
4 Deer bones, one a tooth of some gnawing animal.

SHELF NO. 68.

1 Box charcoal and ashes from the large ash heap.
1 Package of ashes from the large ash heap.

SHELF NO. 69.

36 Pieces of broken vessels.

SHELF NO. 70

13 Bowls.
2 Pots.

SHELF NO. 71.

7 Pots.
4 Water bottles.
3 Bowls, fish shaped.
17 Bowls.
2 Jars.
4 Not known.

SHELF NO. 72.

2 Water bottles with bears' heads.
1 Water bottle with human head.
2 Water bottles with heads.
3 Water bottles.
11 Bowls.
3 Jars.
4 Unknown.

SHELF NO. 73.

218 Pieces of mud and straw burned.

SHELF NO. 74.

169 Pieces of mud and straw burned.

SHELF NO. 75.

476 Pieces of plastering with imprint of split cane; plastering burned.
44 Pieces burned clay.

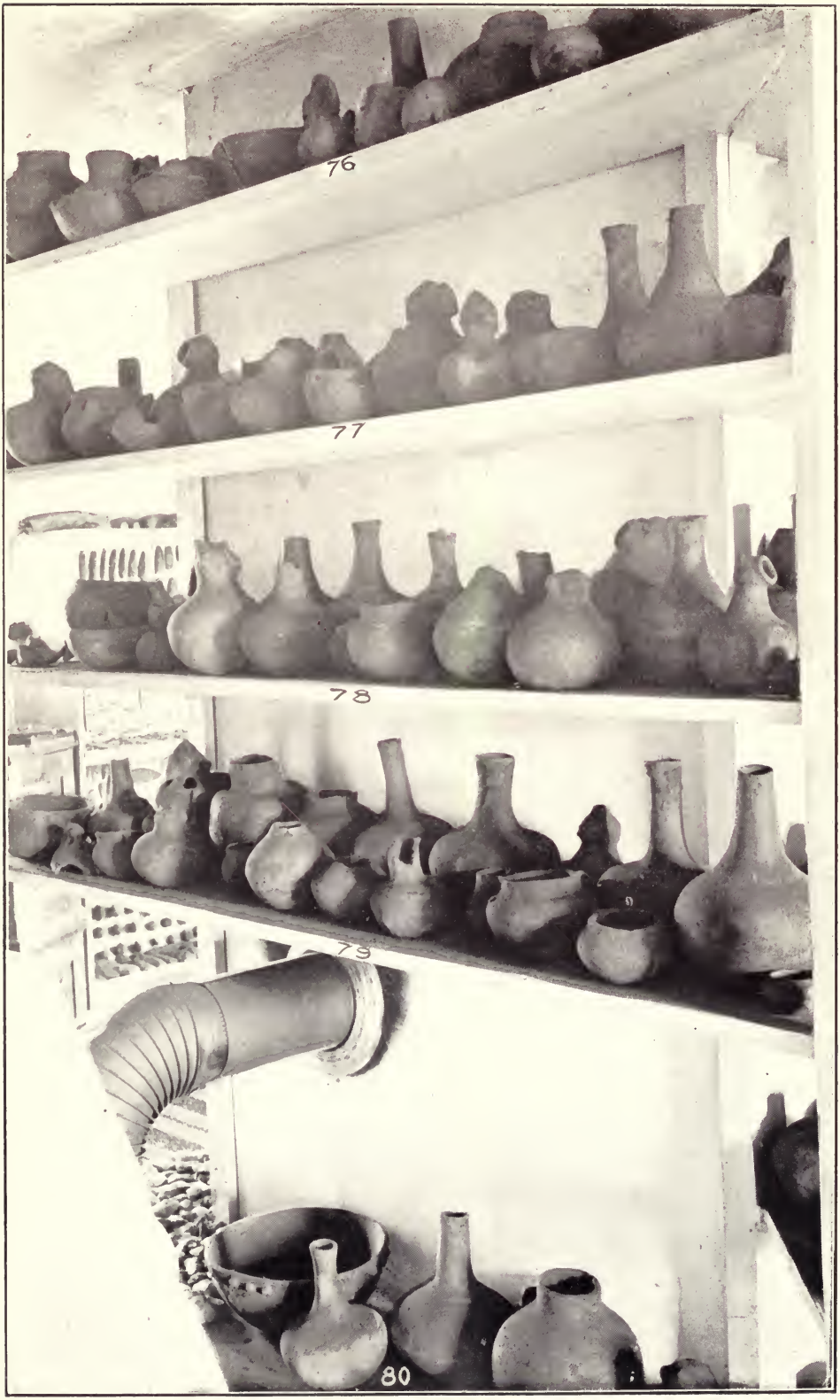

PLATE IX.

CONTENTS OF PLATE IX.

SHELF NO. 76.

2 Water bottles.
3 Water bottles, broken.
4 Jars; one has a bird's head.
2 Pots.
6 Bowls.

SHELF NO. 77.

2 Water bottles with human heads.
1 Water bottle with bear's head.
3 Water bottles with heads.
5 Bowls, one in form of fish.
3 Pots.
2 Water bottles.
1 Large broken vessel in human form.
1 Head of vessel.
1 Jar.

SHELF NO. 78.

1 Pot, large.
6 Water bottles.
6 Water bottles with heads.
1 Bowl with bird head on it.
1 Bowl in form of fish.
2 Bowls.

SHELF NO. 79.

3 Bowls.
1 Water bottle with pot ears.
1 Water bottle in human form.
4 Water bottles.
4 Water bottles with heads.
2 Water bottles, top broken off.
3 Jars.
2 Pots.
1 Broken jar, animal holding something in its mouth.

SHELF NO. 80.

2 Bowls, one large.
1 Bowl in form of a fish.

2 Water bottles.
1 Water bottle with man's head and beard.
1 Jar, large.
1 Head off of vessel.
1 Pot.

PLATE X.

CONTENTS OF PLATE X.

SHELF NO. 81 counted in with No. 101.

SHELF NO. 82.

6 Water bottles, 2 broken.
2 Water bottles with heads.
1 Bowl.

SHELF NO. 83.

3 Water bottles with heads.
1 Water bottle in human form.
5 Jars.
1 Bowl.
2 Water bottles.
1 Piece of pottery, a pumpkin.
1 Piece of pottery, a conk shell.
4 Pieces of pottery, 2 tails, two heads.
1 Jar.

SHELF NO. 84.

1 Water bottle with human form, large.
1 Water bottle, head of an old woman that lost her teeth.
2 Water bottles.
1 Bowl.
1 Paroquet head.
41 Birds' heads.
1 Young bird's head.

SHELF NO. 85.

1 Water bottle, a pumpkin, painted red.
1 Water bottle, man sitting on a bowl.
1 Water bottle, 3 human heads, 5 ridges and 5 depressions around it.
1 Water bottle, one bowl on top of another.
1 Water bottle with a contraction near the top.
1 Water bottle with bear's head.
2 Water bottles with bear's head.
4 Pots.
1 Bowl, form of a duck.
1 Bowl with eyes, ears, nose and mouth of an animal.
1 Bowl, form of mussel shell.
1 Bowl, small.
1 Bowl, form of fish.

SHELF NO. 86.

1 Bowl in form of a fish.
1 Small bowl with three legs.
5 Bowls.
1 Bowl like an old bread tray.
1 Bowl painted red, form of a wash pan.
4 Water bottles with heads.
1 Jar.
1 Water bottle, cup-shaped bottom with 16 holes through the cup.

SHELF NO. 87.

1 Pipe carved out of stone in the form of a man's head.
1 Pipe drilled, but bowl and stem not connected.
5 Pipes, broken.
3 Pipes, broken.
2 Pipes, perfect.
1 Pipe with small stem.
1 Part of conk shell with butt cut off and hole in side.
1 Smoothing stone, large cannel coal.
3 Smoothing stones, small, 2 cannel coal, 1 flint.
10 Plumb stones or sinkers.
1 handle to stick feathers in, a fan handle.
7 Spools for holding thread.
9 Pieces with holes drilled or picked through them.
1 Piece of copper ore.
2 Gourds of pottery.
30 Very small beads.
6 Rocks for some unknown purpose.

SHELF NO. 88.

1 Large scouring stone.
1 Rock, 3 cup stones in it.
1 Mortar, 3 cup stones in it.
1 Mortar made of a pudding stone.
1 Mortar with grooves on end.

PLATE XI.

CONTENTS OF PLATE XI.

SHELF NO. 89.

7 Water bottles, one with glazing partly off.
1 Water bottle, top off.
3 Water bottles with heads.
3 Pots.
3 Jars.
2 Bowls.

SHELF NO. 90.

1 Water bottle, large, with a man's head on top of the bottle.
1 Water bottle, large, top slightly broken.
1 Water bottle, large owl head on top of it.
1 Water bottle, large, bear's head on top of it.
1 Water bottle, with nose, eyes and ears on two sides of it.
1 Water bottle with three legs.
1 Bowl, a shell in form.
1 Bull boat, small.
3 Bowls with legs, small.
1 Water bottle with owl head.
1 Bowl, small scalloped edges and 4 human heads on sides.
21 Small vessels of many forms.

SHELF NO. 91.

1 Water bottle, bear standing on his hind legs, eating.
1 Water bottle, man sitting on one leg, head gone.
1 Water bottle, woman painted white, decorated with dots.
1 Water bottle, monstrosity woman, hole through the breast.
1 Water bottle, 4 balls to rest on.
1 Water bottle, form of fish.
1 Water bottle, 4 suns, acorns representing the sun's rays, red circles.
1 Bowl, 2 bears' heads, one on another.
4 Rattles, 4 small human figures.
1 Bowl, square.
1 Bowl with 4 knobs on side.
5 Rattles, human heads, small.
1 Rattle, biscuit shaped, small.
1 Rattle, animal head, small.
1 Water bottle, very small human form.
1 Head, resembles a negro's.

29 Human heads in form.
1 Part of a vessel, resembles a turkey strutting.

SHELF NO. 92.

1 Water bottle painted light yellow with black stripes.
1 Jar with 2 red bands around the top and 9 broad red stripes running down the vessel, with yellow spaces between.
1 Water bottle, painted red with dark red bands around the stem, with 3 suns painted on the bowl.
1 Water bottle with an opossum's head and irregular black rings painted over the light red bowl.
1 Water bottle, a yellow color on his knees with white stripes, band and dots over body, and face with red breech cloth.
1 Water bottle, owl resting on feet and tail, body painted a dark red, and lighter red representing body feathers and wing feathers.
1 Water bottle with human head with crown upon it.
1 Water bottle, light colored decorated with darker colored narrow zig-zag stripes.
1 Water bottle with peculiar top, a light yellow color with darker bands and stripes over the vessel; large vessel.
1 Water bottle, same as above except it is much smaller and bands and stripes run different.
13 Human heads in form.
56 Pieces representing three hands.
1 Hand with 6 fingers.
4 Human feet.
1 Turtle.
1 Young bird.
Spoon-shaped pieces and many other peculiar forms.

SHELF NO. 93.

1 Water bottle of perfect symmetry.
1 Water bottle, human bald head.
1 Water bottle, human form sitting down, hole in top of head.
1 Water bottle with a peculiar bird head.
1 Water bottle with cup-shaped bottom, 12 holes in cup piece.
1 Water bottle with frog sitting on bowl and stem out of top of frog.
1 Water bottle with human bald head, eyes and mouth open; appears a blind man.
1 Water bottle, human figure, nude.
2 Pieces with a man's penis on each.
7 Biscuit-shaped jar covers.

37 Bottle and jar stoppers.
2 Jar stoppers.
1 Whirl.

SHELF NO. 94.

102 Round wampum beads of shell, from ½ inch to 2 inches across.
30 Flour spar beads, round, pear-shaped, human head, turtle, labrets.
27 Pottery beads, round, oblong, flat, cylindrical, turtle, tad-pole.
3 Ear rings, 2 cannel coal, 1 flat circular pebble.
9 Beads, 6 of shell, 2 crinoids, 1 pebble.
1 Awl or needle, of hammered copper.
29 Labrets formed like stopper, 26 pottery, 1 chalk, 2 pebbles.
2 Pottery rings, 2 inches in diameter.
2 Buttons, 2 inches in diameter.
2 Beads, one with knob on each side, 2 inches long, hole drilled lengthwise.
1 Lot of mica.
10 Small stoppers, pottery, ½ inch to 1½ inches across.
1 Small round piece of pottery with fine lines like thread lines.
19 Pieces of lead 1 piece cylindrical.
14 Marble-shaped pottery balls, from ½ inch to ⅞ inch in diameter.
7 Pottery sling balls, 4 ovoids, 3 round balls.
17 Pieces unknown.
4 Round pieces of pottery.
1 Biscuit-shaped stone, groove cut around it, drilled ¼ inch in each side.
1 Red ochre, round piece, flat sides; piece of mica on it.
8 Pottery whirls.
11 Stone whirls.
1 Yellow ochre whirl.
1 Lot red ochre for painting.
1 Lot yellow ochre for painting.
1 Lot black carbon for painting.
1 Lot white chalk for painting.
33 Paint cups from 1 inch in diameter to 3¾ inches in diameter.
14 Irregular rocks, round cup shaped and biscuit shaped.

SHELF NO. 95.

4 Anvils.
39 Rubbing stones.
1 Cup stone.

PLATE XII.

CONTENTS OF PLATE XII.

SHELF NO. 96.

6 Water bottles, 2 necks gone, 2 with heads.
2 Bowls.
1 Jar.

SHELF NO. 97

4 Bowls.
2 Bowls, animal heads.
2 Jars, one large.
1 Water bottle.
1 Water bottle, human form.
1 Water bottle, human head.
2 Water bottles, human heads.
1 Jar, hole in bottom.

SHELF NO. 98.

1 Water bottle, form of a squash.
1 Water bottle with bear's head.
4 Water bottles, human form.
2 Water bottles, human heads.
1 Water bottle, human, 3 balls attached together to rest upon.
2 Water bottles.
1 Water bottle, bear's head upon it.
2 Mountain sheep heads.
4 Pieces, bear head, dog head, mouse head, squirrel head.
13 Heads of animals.
1 Bear head.
1 Bear head.

SHELF NO. 99.

85 Chipped flints, scrapers, etc.; some paleoliths in form.

SHELF NO. 100.

79 Chipped flints, scrapers; paleoliths in form.

SHELF NO. 101.

224 Chipped flints in many forms.
1 In form of turtle flint.
2 Round flints.
6 Biscuit-shaped flints.
20 Flint picks.

SHELF NO. 102.

45 Cup stone flints.
5 Rubbing stones.

PLATE XIII.

CONTENTS OF PLATE XIII.

ON THE YARD FENCE.

90 Handstones, throwing.
830 Large sling stones.
616 Small sling stones.
13 Large mortars.
12 Small mortars.
1 Broken mortar.
1 Large bottom rubbing stone.
1 Triangular stone found between 2 carved images.

PLATE XIV.

CONTENTS OF PLATE XIV.

13 Cup stones.
6 Hammer stones.
7 Rubbing stones.
96 Broken pottery sling balls.
21 Pieces of plastering with impressions of split cane.
6 Pieces of mud and straw.
270 Broken arrow points.
25 Broken greenstone axes and hatchets.
14 Broken flint scrapers.
10 Broken chipped flint spades.
110 Sand stones.
43 Gallons of chips.

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